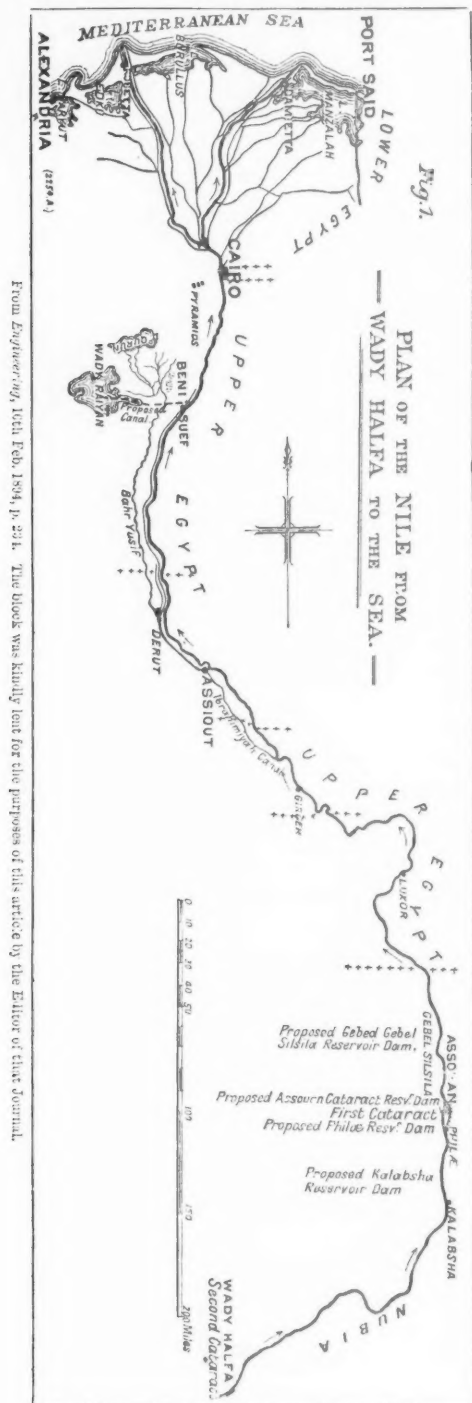


NILE RESERVOIRS: THE FAYOUM AND RAIYAN-MOERIS.

By MR. COPE WHITEHOUSE, M.A., *Grand Officier de l'Ordre du Medjidieh.*

MORE than two thousand years have passed since Herodotus contributed to Hellenic literature an account of three monuments of the ancient world, which stood on the confines of the unconquerable Desert, and whose foundations had been laid before the world of history began. They were all on the physical frontiers of human thought. No effort of man can ever carry the triumph of art over nature beyond the rocky plateau on which stand the huge pyramidal masses of Gizeh and Dahshur. If the Ionian traveller might have been deemed capable of exaggerating, though with no apparent motive, the dimensions of the Labyrinth, Strabo was well fitted by birth and education to estimate justly human achievements, and Pliny declared that this vast structure was still considered by Roman architects and engineers the most striking and awe-inspiring work of human hands. It, too, stood in the Desert. "Wonderful as is the Labyrinth," said Herodotus, "the work called the Lake of Moeris, which is close by the Labyrinth, is yet more astonishing. The circuit of its circumference is 3,600 furlongs, which is equal to the entire length of Egypt along the sea-coast." Thus these three productions of human intelligence and organised labour were associated not only in contiguity, but in pre-eminence; and passed so far beyond the range of modern thought that, in 1882, it was denied that two of them, and those the more splendid of the trilogy, had ever existed. Architectural and engineering works are dramas. "Who is he," exclaimed Diodorus, gazing upon the vast expanse of the Lake of the Sea, "that considers its admirable utility and its incredible magnitude, that is not forced to ask how many myriads of men were employed, and how many years were spent in its completion?" "Considering the benefit and advantage brought to the Government by this great work, none ever could sufficiently extol it, according to what the truth of the thing deserved. For being that the Nile never kept to a certain and constant height in its inundation, and the fruitfulness of the country ever depended upon its just proportions, King Moeris dug this lake to receive such water as was superfluous, that it might neither immoderately overflow the land, and so cause marshes and standing pools, nor, by flowing too little, prejudice the fruits of the earth for want of water."

Had the Greek men of letters been in closer harmony with the skilful engineers who constructed the Pyramids, the Labyrinth, and the Lake, it would have been better for their own reputation, since, at all events, Voltaire ridiculed, and Jomard denied, the possibility of such an excavation as would correspond to their description. A wise adaptation of means to ends is a characteristic of Oriental engineers from the earliest times. It enabled the Phœnicians to propose to Xerxes what have seemed to us mythical or monstrous feats. It induced the architects of the Ptolemies to cover the island of Philæ with temples, which grow out of, and complete the work of, Nature.



The Pyramids of Gizeh were saved from destruction at the hands of Mehemet Ali half a century ago by Linant de Bellefonds. The Labyrinth, lost to sight, was lost to literature when Lepsius identified it, with singular crudeness and temerity, as the miserable hovels of wretched unbaked mud-bricks at Hawara. Well might Messrs. Perrot and Chipiez say: "The plan and description of the building, first discovered and described by Jomard and Caristie, hardly corresponds with the account of Strabo, and with what we learn from other ancient sources as to the magnificence of the Labyrinth and the vast bulk of the materials of which it was composed" [*History of Art in Ancient Egypt*, p. 25]. The inland sea had also disappeared. It had not simply been evaporated by the sun, but deleted as a fable. Jomard had given to the shallow lake of the Fayoum, the Birket el-Qerun, a somewhat increased surface and about sixteen feet of greater depth, and then abandoned the measurements and other features—the depth of 250–300 feet, the circumference of 450 miles, the blue colour of its waters, the prolific fisheries, with the countless fishermen on its sandy shores, its major axis stretching north and south, the pyramid-crowned island where the water was nigh fifty fathoms deep—to be treated as textual error or vain repetition of wilful falsehood. The whole fabric of Greek and Roman literature, historical and scientific, was thus shaken to its base.

Worse fate was in store for the Lake when Lepsius persuaded the scientific world to accept the theory of Linant de Bellefonds.

From the Arab conquest to the time of Mehemet Ali, the cultivation of Egypt had been by inundation. This foreigner, who as coming from ancient Greece might be compared with the Ptolemies, introduced into Lower Egypt that substitution of irrigation for inundation which first turned attention to the storage of a part of the surplus flood-waters of the Nile for use in summer. Egypt has three seasons, not four; and summer, therefore, is here a conventional term employed for the period from the middle of April to the middle of July, at which the Nile, which discharged into the Mediterranean

a thousand million cubic metres on 10th October 1878, had delivered at Cairo on 1st July of the same year scarcely fifteen millions. This year, for more than two months, not a single drop has come within miles of the Mediterranean, except as polluted with salt and sewage, trickling from drainage cuts into the beds of the Damietta and Rosetta branches, laid bare and dry by the Barrage, or into the salt marshes from Mareotis to Menzaleh. The peasant of Lower Egypt is engaged during the inundation in keeping the flood out of his lands, which are covered with summer crops during the entire period, and are already in September whitening with cotton. These agriculturists, however, read in Arabic books, such as those of Ali Pasha Mubarekh, or in the vernacular papers, seven of which have a circulation of many thousand copies, the story of how the Pharaohs prevented the flooding of the Delta by escaping the water into the Fayoum.

In April these farmers are anxiously telegraphing to Cairo, or studying the daily bulletins, to determine whether the supply to be expected from Equatorial Africa will justify further labour on fields planted on the chance that the Nile may deliver a maximum of thirty million cubic metres as against the average of twenty. From August to October they are only eager that the delivery should be the least possible. While, therefore, a million cubic metres supply of water per day, up to a total supply of thirty millions, represents in round terms £500,000 worth of crops, beyond this amount it is useless. Every inch of excessive flood is a loss in the labour expended in guiding it to the sea, and four inches of further rise at Assouan in October are quite sufficient to strike with dismay the heart of the Government, and threaten or produce disasters which are to be measured by millions of pounds. This danger is increased by the wider area recently brought under summer cultivation. High-flood relief is a necessity.

To the south of Cairo all this is changed. The peasant pursues the ancient method of cultivation. He is dependent upon the inundation to which the fellah of the Delta is indifferent and hostile. The long plateau, which extends in varying width by the side of the perennial river-bed, is enclosed by embankments of earth, or on one side by the Desert. Such an area is technically termed a basin. In June it is an arid plain, except where small patches of Indian corn, millet, or melons are irrigated. If this irrigation is carried on by lifting the water with the well-known *shadoof*, the result is a "living wage" of three farthings for a day's work of eight hours. Steam pumps and perennial irrigation are confined to favoured areas. The Nile flows past the lands of Upper Egypt for five hundred miles protected by the Government, and preserved for the use of the Delta with its prescriptive claims.

There is otherwise a cessation of all employment. The sun splits the black earth into

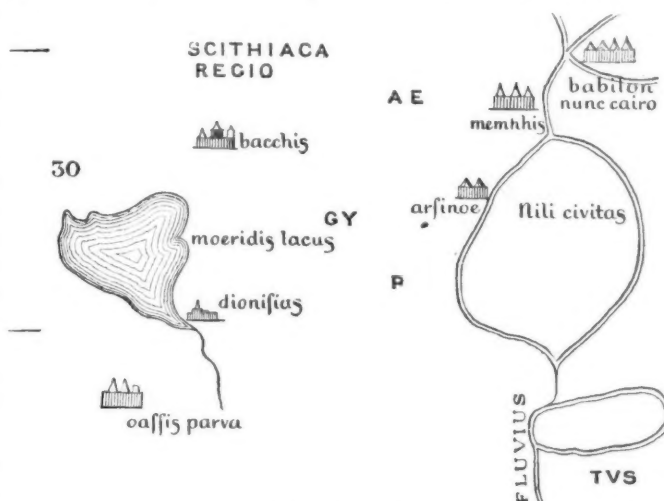
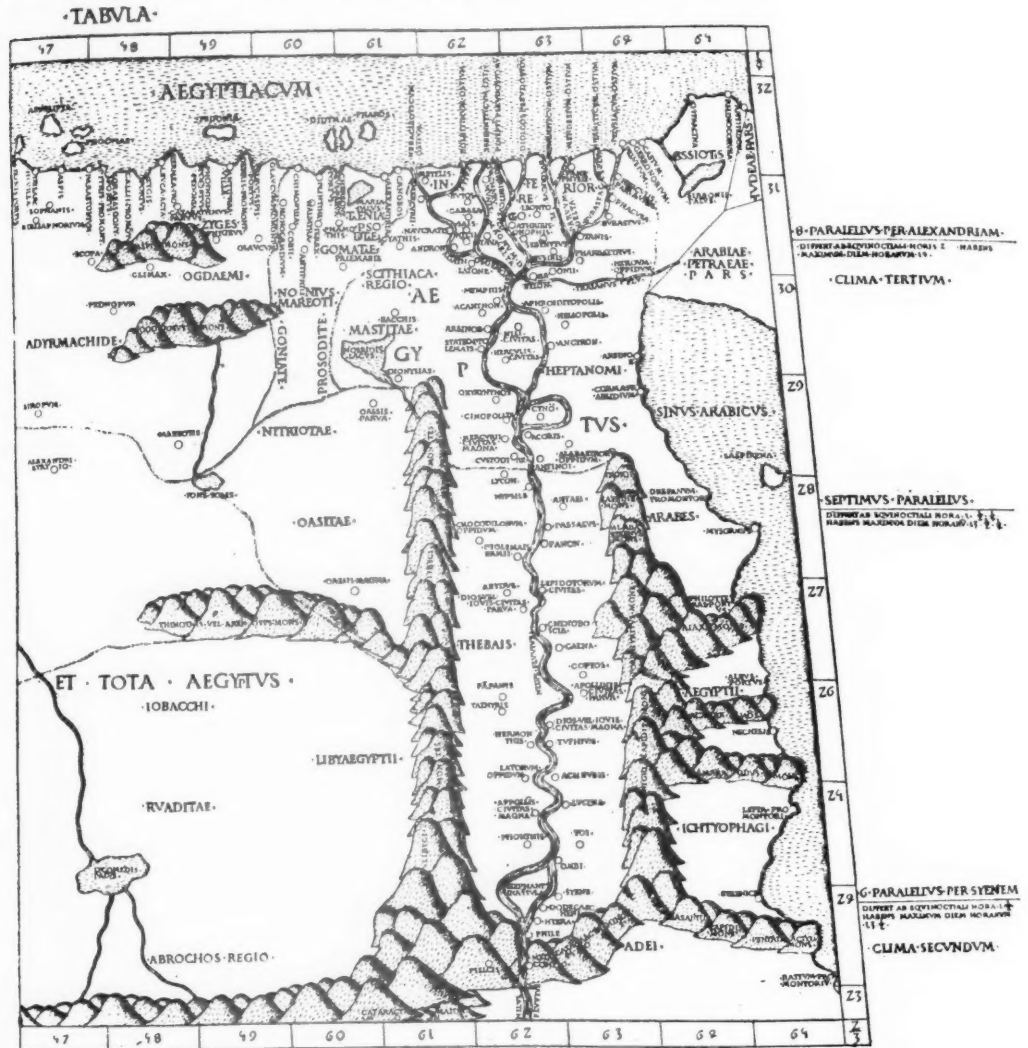


FIG. 2.—MIDDLE EGYPT.

From an Atlas by Claudius Ptolemy in the Doge's Palace of Venice. 1554.

clods. The deep fissures serve as a subsoil ploughing. In the end of August they will be filled with the silt-charged water. In September the basin is a lake, except where the villages, palm-groves, and gardens are protected from the flood, or where the upper corner of each basin, nearest to the river, owing to the slope of the terrace, has not yet received the last



filling, which usually takes place in October. Thus these basins are like steps by the side of the stream. The peasants are employed in preserving their isolation, and defending the great main bank from the river, and the cross banks from the action of the waves.

The sun still ploughs and the Nile manures over 2,000,000 acres, which yield £9,000,000. But there is a tract of about 300,000 acres, developed by Ismail Pasha, which is assimilated

to the irrigated areas of the Delta, and produces £2,500,000, of summer crops, chiefly sugarcane. Every peasant naturally desires that his land also should be irrigated. He only asks permission to exclude the inundation and satisfy his wants from the life-giving river. The low-Nile daily flow at the cataracts of Assouan is about 30,000,000 cubic metres. For that part of the Nile Valley lying south of Assiout there would be required about 12,000,000 cubic metres daily, and from Assiout to Cairo about 10,000,000 more. Thus no reservoir is required for Upper Egypt, so long, at all events, as the Italians, Abyssinians, English, Germans, Congolese, and French, who now surround the catchment basin of the Equatorial rainfall, or the Mahdists who control its passage at Khartoum, neither extend cultivation nor tamper with a great lake or a little affluent. The water-storage, which threatens the submergence of the island of Philæ, the destruction of the ancient remains in the valley for a hundred miles, the extrusion of 30,000 inhabitants of Nubia, the depopulation of this section of the great river-way, is not to be utilised for six hundred miles. The total amount required to give Upper Egypt all that it longs for but may not touch, to maintain existing areas in the Delta, and extend cultivation to the coast-line and the Menzaleh bank of the Suez Canal, is only 3,600 million cubic metres. It is obvious that an increased delivery from Lake Victoria-Nyanza, with its surface of 70,000 million metres, of three inches would be more than enough, and equal the proposed dam of 70 feet at Philæ. If the Abyssinians would hold up four feet on Lake Tsana it would serve the purpose still better. If the six cataracts in the long course of the Nile from Assouan to Khartoum were strengthened, raised, and contracted, so as to detain a little longer in the reaches of the river the onward progress of the water, no reserve would be required, certainly above Cairo.

Reverting to the present condition of basin-cultivation in Upper Egypt, after these basins have been filled, and stood undisturbed for ten days, the agriculturist prays to Allah, as in Strabo's time he implored Isis and Osiris, to lower the Nile as rapidly as possible, so that the seed may be sown and the crop spring up during the cool autumn. The moisture that is in the ground is, in the absence of rain, the sole source of aqueous nutrition. If, therefore, the period of drainage be delayed, the crop is overtaken by the parching winds of spring, and is stunted in straw and with scant-filled heads. The emptying of these basins, however, is a very delicate operation. The Nile must have fallen low enough to accept the increased volume without endangering the land further north. The banks in the Delta will have been weakened by three months' strain. The peasants, of whom 53,000 worked last year as Nile *corrée*, forced, unfed, and unpaid,* grudge each hour taken from their own fields; and force, fine, and imprisonment are required to keep them at their posts. The peasants of Upper Egypt join with their brethren of Lower Egypt in the demand for a drainage-canal and flood-escape above the neck of the Delta.

On the 3rd March 1882, a camel, a horse, eight Arabs, and a European were in the Desert fifty miles west of the Nile, in the latitude of Beni-Suef. A less attractive region could not be imagined. Never travelled by any except an occasional Bedouin, it was a moment of exceptional danger as revolt was already imminent in Cairo. The son of the Sheikh had abandoned me an hour after daybreak. His father had exacted a pledge—was it for his horse's sake or mine?—that I would not sleep beyond the limits of the Fayoum. Somehow travellers' note-books are always recovered, and as I rode I pencilled a line: "He filled Lake Moeris, threaded the Labyrinth, and solved the secret of the Sphinx." At least the world should know my object, if mine were to be the notoriety of a strange death. None of these things have been accomplished. Still, that visit has marked an epoch in more than one department of

* See Parliamentary Report, Egypt, No. 1, 1894, pp. 34, 35.

scientific inquiry. The Royal Institute of British Architects published in 1888 a map* which shows that the Fayoum is not, as had been previously stated, bounded on the south by Desert rising to the high plateau. This depression, for which I retained the Arabic name given to the spring and small oasis in its southern corner, has been made the subject of minute investigation. The map of the Roman edition of Claudius Ptolemy [fig. 3] led me to believe that it might be used as a drainage-basin for Middle Egypt, if not as a reservoir. "So extensive," says Mr. Garstin in his Report on Perennial Irrigation and Flood Protection in Egypt (1894, p. 30), "has been the literature that the name of the Wadi Raiyan ought to be as well known to the world as the Lake of Geneva." "It is the opinion of all the authorities cited, including Sir C. Scott-Moncrieff, Colonel Western, Colonel Ross, and Major Brown, that the



FIG. 4.—TEMPLE NORTH OF DIMEH, THE ANCIENT BACCHIS [FIG. 2].

"project of converting it into a lake is a perfectly feasible one, and that the reservoir thus formed could be utilised to supply the wants of Lower Egypt during summer."

It was expressly stated by the historians of the five centuries which include Herodotus and Pliny that the Fayoum depression was a part at least of a vast lake, 450 miles in circumference, filled annually, above the level of low-Nile at Memphis, with an evaporating surface and an escape-canal sufficient to ensure to the inhabitants of Middle Egypt independence of the Nile as a drainage-canal. Instead of running the water off to the Mediterranean, they opened the sluices, or, in more intelligible technical language, cleared the silt from the flood-escape, and lowered the waters in the basins outside at pleasure.

In 1882 the entire scientific world had accepted the theory of Linant de Bellefonds, which assumed that the great lake was, in fact, only a small local reservoir. My researches

* TRANSACTIONS, Vol. IV. N.S. between pp. 16 and 17 : Geological Sketch Map of Egypt and Sinai, by W. Topley, F.G.S.

conclusively proved that the alleged facts were erroneous, and that in the fifth century B.C. practically the entire area was submerged. On my visit to Dimeh a temple was pointed out in the Desert, about five miles to the north. Dr. Schweinfurth justly enjoys the honour of having visited and described it (1885). It was, as my photographs (1889) [figs. 4 and 5] show, only a garrison temple. Its façade [fig. 4] may have been covered with stucco, which might account for the vertical position of the stones. The bold and chaste style of the interior [fig. 5] forbids the imputation of coarse or clumsy workmanship. It stands at the level of cultivated land in the Nile Valley. Its position proves that the lake once stretched in a vast



FIG. 5.—INTERIOR OF TEMPLE [FIG. 4].

sheet of water from Medinet to the western hills, broken only by a pyramid-crowned island, which I identify with Dimeh. This promontory would be an island if the water reached the level of Medinet; and the long causeway, which Lepsius described as a street, has been pronounced by Dr. Schweinfurth to have been a quay. My aneroid observations were verified and confirmed by a Government expedition under Major Brown.*

Is this the Bacchis, whose latitude and longitude are given in the text of Claudius Ptolemy? It is scarcely possible to determine which of the two points was selected by the Alexandrian cartographer to mark the northern end of the district of Moeris. On the south, the Wadi Raiyan connects with a long, narrow valley, shown by my observations to be slightly

* See his work, *The Fayoum and Lake Moeris*.

below the level of the Nile. It communicates with the Raiyan basin by a valley a little higher than the flood level. It contains the remains of a monastery [figs. 6 and 7], frequently altered or rebuilt, but apparently abandoned in the fifteenth century. This is the Dionysias of Ptolemy. Its gateway [fig. 7] was discovered by me, in 1883, at a farmhouse thirty miles distant, on the Bahr Jusuf, to which it had been transported stone by stone on camels.

The Raiyan basin must not be confounded with the Moeris of Herodotus. But as that traveller expressly describes the lake in his day as longer than it was wide, his words would be justified by assuming that this depression was a southern basin, into which the overflow passed when the lake had risen above a certain height. It is clear that the Lacus Moeridis of the Ptolemaic Atlas [fig. 2] was never intended to represent that of Herodotus; nor can it be a mediæval attempt to reproduce the submerged Fayoum, or the Birket el-Qerun. It corresponds so closely in position, shape, and size, with the Wadi Raiyan and Wadi Muallah that it would seem

impossible to explain its presence as the fortuitous result of a merely conjectural restoration of the lost lake of the Greek historian.

It is a striking illustration of the irony of Fate, that the success of those engineers who designed Moeris, and their successors of the Ptolemaic renaissance, should now threaten the submergence of the fairest, the most poetic, architectural remains in Egypt; and, incidentally, the early extinction of every trace of human labour, except two, from Assouan to Cairo [fig. 1]. The Citadel and the Pyramids would still confront each other across the plain where Cairo was. Memphis was thus threatened, according to Herodotus. It has been obliterated. The Fayoum



FIG. 6.—COPTO-BYZANTINE CAPITAL AT DIONYSIAS [FIG. 2].

would be a place of refuge, and from this ark the land might be repopled. Except the Pyramids all the monuments would have utterly perished.

Linant de Bellefonds was so intimately acquainted with the Nile that the problem of storage presented itself to his mind in its true complexity. He recognised the impossibility of making a reservoir in the valley itself, with due regard to the safety of the country. When one stands in the presence of a Pharaoh, to whose ancestors, centuries earlier, had been due the regulation of the Nile by the Fayoum-Moeris, he realises that time in Egypt is not as elsewhere. Three thousand years have not sufficed to crumble to ashes the frail tenement of that soul, much less to fade the map of a gold-mine worked in B.C. 1357. Seti I. expressed his belief that future generations of travellers, from Koptos to Berenice, who quaffed a cup of water from the perennial well he had with infinite perseverance sunk in the Desert, would bless his name. The hieroglyphs are an equivalent of those Greek words of Diodorus, which tell how the king, known to him as Moeris and the Arabs as Raiyan, thought that in the great lake he had left an imperishable monument to his belief in the True, the Beautiful, and the Good, as the end and aim of a wise monarch.

When, therefore, about 1840, Linant de Bellefonds was called upon by Mehemet Ali to advise upon the best method of increasing the summer supply, he discussed, only to dismiss from further serious consideration, a storage reservoir formed by a dam across the river. An elevating dam, such as he proposed, at Silsileh, keeping the water at about flood-level, would have been only a repetition, higher up, of the Ibrahimieh system of perennial canals, and the Bahr Jusuf, with its successful career of well-nigh four thousand years. The Barrage, at the neck of the Delta, is a similar structure. Here, however, the peculiar configuration of the bed of the Nile, which drops to the level of the sea, forms a deep pool which the flood-waters of the river no longer scour. At this very moment the river is stagnant at Ca'ro, of a dark

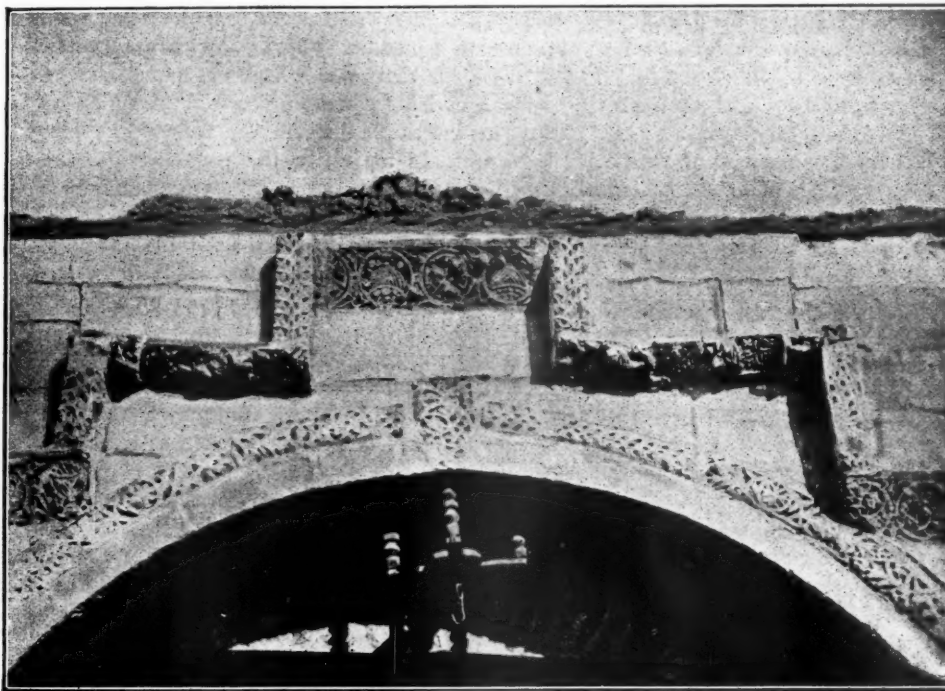


FIG. 7.—GATEWAY OF THE DEIR MUELLAH, THE ANCIENT DIONYSIAS OF PTOLEMY.

green colour, and even the water which is delivered from the hydrants has an offensive smell. It is an objection to any barrage in such a climate, and dealing with water so highly charged with putrescent germs as the White Nile, that when ponded up it rapidly deteriorates. It would be fatal to a Silsileh reservoir, scarcely less serious at Assouan, but would perhaps permit storage at the Kaibar cataract, with the subsequent aëration in the long Nubian reaches of the river and their filtering beds of sand.

Political and strategic objections did not then exist. No one even dreamed that the frontier of Egypt could ever be brought back to Wadi Halfa. Who could imagine that such a well-known disease as Mahdism would be so neglected as to cause in four years the loss of five million lives? Sporadic cases of this religious mania had been treated by mild or drastic measures, by a bribe or the knife, by every Caliph and Cadi in Islam since the death of the Prophet. Ismael understood the disease, and each outbreak was confined to the local centre.

Linant de Bellefonds proposed to utilise the upper Eastern plateau of the Fayoum, with a surface of 400 square kilometres and a storage capacity of 2·915 million cubic metres. The project was never studied in detail. It was again mentioned by him in 1872, but only as of academic interest. In 1880-82 an attempt was made to change his Silsileh project into a reservoir by a French group under the direction of a M. La Motte, backed by Nubar Pasha. It had no real principle of vitality. It has, however, from time to time, been presented for renewed consideration. It has of late been hoped, rather than thought, that it might furnish an answer to the question, How to save Philæ?

At precisely the same time I was pursuing those "scholastic researches," as Lord Cromer has termed them, which were mainly based upon the Greek historians, Arabic traditions, and Ptolemaic maps. "It is probable," wrote Mr. Moberly Bell in *The Times* of 2nd May 1888, "that if Mr. Cope Whitehouse had appeared in Egypt in 1882 as the mercenary would-be promoter of a simple commercial enterprise, his views would from the first have received a more serious consideration. It is, however, at least equally probable that they would not have achieved the same success." It seems incredible that, in the face of the figures by which the Department of Public Works now seeks to justify the proposed destruction of Philæ, the value of a drainage-canal or flood-escape and a storage-reservoir should have been persistently denied from 1883 to 1891. The official estimates of annual gross receipts are now £12,000,000. In 1887, and again in 1888, Sir C. Scott-Moncrieff fixed the maximum net revenue at £115,000, and Mr. Moberly Bell put it at about £80,000. Yet I had furnished to the Foreign Office in 1887 my own calculation, verified by evidence of a trustworthy character, that an increased revenue of £2,500,000, or a capitalised value of £100,000,000, would result from pouring the superfluous and dangerous waters of the Nile into the barren desert of the Wadi Raiyan! To use Mr. Moberly Bell's words again, "Mr. Cope Whitehouse had indicated to the Government the existence of an Eldorado, and they hesitated to avail themselves of it." He might have added: or allow others to carry these researches to a practical conclusion at personal pecuniary risk.

So far as the addition to the prosperity of Egypt of this large sum is concerned, it seems certain that my estimates can no longer be considered exaggerated. Sir B. Baker concedes £7,000,000 per annum of gross receipts, and if he proposes that the tax-collector shall only tithe this amount, it is in ignorance of the fact that the proportion is the other way. The peasant of Upper Egypt tithes the flood-crop, and is content when only nine-tenths go to the Government. Those who are interested in the preservation of Philæ must confront this financial issue, and recognise the impossibility of seriously demanding the maintenance of the present situation at any such annual loss as even £2,500,000.

It is with poignant anguish, and a strong claim to sympathy, that I watch, with feelings akin sometimes to terror, the conversion of the fame of a King Moeris, and of that Pharaoh Raiyan who befriended the patriarch Joseph, into the dis fame of an Erostratus. There would have been no reservoir proposed had it not been for me. At least, before a final decision is reached, let us each strive to secure the fullest possible examination of the whole subject in its strategic, sanitary, political, æsthetic, and historical aspects, as well as from financial and engineering points of view.

COPE WHITEHOUSE.





CHRONICLE.

The late President of the French Republic.

At the General Meeting of the 25th ult., before the business of the evening was taken, the President, Mr. Penrose, F.R.S., referred to the assassination of Monsieur Carnot at Lyon on the previous evening, and asked leave to move a resolution expressing the sympathy of British architects with their French brethren in an affliction which had plunged not France alone but the whole civilised world into deepest grief. The motion, seconded in moving terms by Mr. Charles Barry, F.S.A., *Past President*, was passed in silence; and a letter was despatched, at the close of the Meeting, to the President and Council of the Société Centrale des Architectes Français, as follows:—

GENTLEMEN AND HONOURED COLLEAGUES,—At a General Meeting of the corporate body of British Architects held this evening, for the purpose of investing Sir Frederic Leighton, P.R.A., with the Royal Gold Medal presented by Her Majesty The Queen, for the promotion of Architecture, it was unanimously

RESOLVED, that the Royal Institute of British Architects desires to be associated with the Central Society of French Architects in an expression of the horror and indignation with which the news of President Carnot's mournful death has been received; and to offer, on behalf of British architects, at home and beyond the seas, respectful and sympathetic condolence with their colleagues of France in the terrible calamity of last night.

We have the honour to remain, &c.,

F. C. Penrose, *President*.
Aston Webb, *Vice-President*.
John Slater, *Member of Council*.
Wm. Emerson, *Hon. Secretary*.

William H. White, *Secretary*.

25th June 1894.

The following reply, addressed to Mr. Penrose, was received from Monsieur Daumet [*Hon. Corr. M.*] on the 29th ult.:—

Paris, le 28 Juin 1894.

MONSIEUR LE PRÉSIDENT ET TRÈS HONORÉ CONFRÈRE,—Les membres du Bureau et du Conseil de la Société centrale des Architectes français,

réunis hier, ont entendu la lecture de la lettre confraternelle que vous me faisiez l'honneur de m'adresser au nom des membres de l'Institut Royal des Architectes britanniques, à l'occasion du deuil qui frappe notre pays. Tout français méritant ce nom est encore frémissant du crime accompli sur le digne Président de la République, Monsieur Carnot. Nous sommes tous pénétrés de vive gratitude par l'expression des sentiments d'indignation ressentis par nos confrères anglais dans une circonstance aussi douloureuse que tragique.

En votant hier une adresse à la veuve ainsi qu'à la famille du grand citoyen que la France vient de perdre, la Société centrale des Architectes français n'a pu mieux faire que de reproduire textuellement le passage de la lettre où vous exprimez avec tant d'éloquence et si énergiquement votre horreur pour le forfait accompli.

Nous sommes toujours touchés, Monsieur le Président et très honoré Confrère, des témoignages de bonne confraternité que vous nous donnez en toutes circonstances; et récemment encore nous étions unanimes, à notre réunion annuelle, en vous adressant nos vœux les plus chaleureux pour la prospérité des membres de votre Institut Royal.

Veuillez recevoir, Monsieur le Président et très honoré Confrère, l'expression de mes sentiments de haute considération et de cordiale sympathie.

Le Président de la Société centrale des Architectes français; Membre de l'Institut:

H. DAUMET.

THE ANNIVERSARY DINNER.

Monday, the 2nd inst., being the sixtieth anniversary of the First General Meeting of the Institute, which was held on the 2nd July 1834 at the old Thatched House Tavern, was the occasion of a Festival Dinner, to which were invited several noblemen and gentlemen, some of whom were able to honour the Institute with their presence. The Dinner took place in the Whitehall Rooms of the Hotel Metropole, with Mr. Penrose, F.R.S., President, in the Chair, supported on his right by the Ambassador of the United States, the President of the Royal Society, the Bishop of Ely, Sir Edmund Lechmere, Sir Douglas Galton, the President of the Institution of Civil Engineers, and the representatives of other corporate bodies; while on his left were the President of the Local Government Board, the Bishop of Peterborough, Sir F. Dixon-Hartland, Sir John Fowler, Sir Stuart Knill, the President of the Surveyors' Institution, and other representatives. A full list of the guests and members, with a few of the latter's friends, making a total of 208, is here given:—

Professor Aitchison, A.R.A., *Past Vice-President*; Mr. T. W. Aldwinckle [F.]; Mr. L. Alma-Tadema, R.A. [H.A.]; Mr. J. Macvicar Anderson, *Ex-President*; Mr. Richard Armstrong [F.]; Mr. H. S. Ashbee, F.S.A.; Mr. James Bailey; Mr. T. Barnes-Williams [F.]; Mr. R. Barratt;

Mr. Charles Barry, F.S.A., *Past President* (*Royal Gold Medallist*); Mr. J. Wolfe Barry, C.B., M.Inst.C.E. [H.A.]; His Excellency the Hon. Thomas F. Bayard, Ambassador U.S.A.; Mr. Wyke Bayliss, President of the Royal Society of British Artists; Mr. Walter Beetles; Mr. John Belcher [F.]; Mr. E. Ingress Bell [A.]; Mr. Thomas Blashill [F.]; Sir A. W. Blomfield, A.R.A., F.S.A., *Past Vice-President* (*Royal Gold Medallist*); Mr. Godfrey Boulton, M.A.; Mr. David Brandon, F.S.A., *Past Vice-President*; Mr. F. S. Brereton [F.]; Mr. Thomas Brock, R.A.; Mr. Bernard Brooks; Mr. C. W. Brooks [A.]; Mr. James Brooks, *Vice-President*; Mr. J. Martin Brooks [A.]; Mr. J. M. Brydon [F.]; Mr. W. D. Caroe, M.A., F.S.A. [F.]; Mr. G. E. Carpenter; Mr. Arthur Cates, *Past Vice-President*; Mr. Francis Chambers [F.]; Mr. F. Chancellor [F.]; Mr. Ewan Christian, *Past President* (*Royal Gold Medallist*); Mr. T. Chatfield Clarke [F.]; President of the Surveyors' Institution; Mr. H. H. Collins [F.]; the Right Rev. Lord Alwyne Compton, D.D., Bishop of Ely [H.A.]; Mr. A. M. Cope; Mr. Charles H. Corbett, J.P.; Mr. W. H. Corfield, M.A., M.D. [H.A.]; Mr. J. D. Crace [H.A.]; Mr. Walter Crane; the Right Rev. Mandell Creighton, D.D., Bishop of Peterborough; Mr. G. R. Crickmay [F.]; Mr. A. G. Cross; Mr. Alfred W. S. Cross [F.]; Mr. Edgar Cross; Mr. Alfred Culshaw [F.]; Mr. Henry Currey, *Past Vice-President*; Mr. T. W. Cutler [F.]; Mr. H. D. Davis [F.]; Sir F. Dixon-Hartland, Bart., M.P., F.S.A.; Mr. E. J. Dodgshun [F.]; President of the Leeds and Yorkshire Society; Mr. T. Olinthus Donaldson; Mr. Thomas Drew, R.H.A. [F.]; President of the Royal Institute of Architects of Ireland; Mr. John Dunn [F.]; Colonel Edis, F.S.A. [F.]; Mr. T. M. Ellis [A.]; Mr. William Emerson, *Hon. Secretary*; the Venerable Archdeacon Farrar, D.D., F.R.S.; Mr. Barr Ferree; Admiral Field, M.P.; Prof. Banister Fletcher [F.]; Mr. E. B. Florence; Mr. H. L. Florence [F.]; Mr. Arthur S. Flower, M.A., F.S.A. [A.]; Sir Walter Foster, M.P.; Mr. Charles Fowler [F.]; Sir John Fowler, Bart., K.C.M.G. [H.A.]; Mr. Frank Fox [A.]; Mr. Charles France [F.]; Mr. T. Fraser; Mr. W. J. Fraser; Sir Edwin Galsworthy; Capt. Sir Douglas Galton, K.C.B., F.R.S.; Mr. Ernest George [F.]; Mr. E. M. Gibbs [F.]; President of the Sheffield Society; Mr. Alfred Gilbert, R.A.; Mr. Alfred Giles, Ex-President Inst.C.E.; Mr. William Glover; Mr. John Goodacre, President of the Leicester Society; Mr. Alex. Graham, F.S.A., *Vice-President*; Mr. G. E. Grayson [F.]; Mr. Frank C. Greenfield; Mr. Horace Gundry [F.]; Mr. J. H. Gwyther; Mr. W. W. Gwyther [F.]; Mr. Charles Hadfield [F.]; Mr. William Hale [F.]; Ex-President of the Birmingham Society; Mr. Edwin T. Hall [F.]; Mr. Octavius Hansard [F.]; Mr. E. J. Hansom [F.]; Mr. Edward Hanson; Mr. E. H. Harbottle [F.]; Mr. F. H. A. Harcastle [A.]; Mr. Thomas Hardy; Mr. Thomas Harris [F.]; Mr. Christopher Harston [F.]; Sir Charles A. Hartley, K.C.M.G., F.R.S. [H.A.]; Mr. Henry Hartley [F.]; President of the Liverpool Society; Major Heales, F.S.A. [H.A.]; Mr. G. T. Hine [F.]; Mr. John Holden [F.]; President of the Manchester Society; the Very Rev. S. R. Hole, D.D., Dean of Rochester; Mr. F. U. Holme [F.]; Mr. J. W. Hulke, F.R.S., President of the Royal College of Surgeons; Mr. F. W. H. Hunt [F.]; Mr. B. Ingelow [F.]; Mr. Henry Jarvis [F.]; Mr. James Jerman [F.]; President of the Devon and Exeter Society; Mr. George Judge [F.]; the Right Hon. Lord Kelvin, President of the Royal Society; Mr. George Kenyon [A.]; Colonel Sir N'g I Kingcote, K.C.B. [H.A.]; Sir Stuart Knill, Bart., Master of the Worshipful Company of Plumbers; Mr. W. H. Knowles [F.]; Mr. Edwin Lawrence, LL.B. [H.A.]; Sir Edmund Lechmere, Bart., M.P.; Sir Frederic Leighton, Bart., President of the Royal Academy [H.A.] (*Royal Gold Medallist*); Sir James D. Linton, President of the Royal Institute of Painters in Water Colours; Rev. Donald Macleod, D.D.; Mr. E. H. Martineau [F.]; Mr. A. J. Meacher [A.]; Mr. Ed. W. Mountford [F.]; President of the Architectural Association; Mr. G. C. Morant; Mr. Andrew

Moseley [F.]; Mr. James Murgatroyd [F.]; Mr. A. S. Murray, LL.D. [H.A.]; Mr. John Norbury; Mr. John Norton [F.]; Mr. J. G. Finch Noyes [F.]; Mr. W. Q. Orchardson, R.A. [H.A.]; Mr. James Orrock, R.I.; Mr. Alfred T. Osmond [H.A.]; Mr. J. Oswald [F.], President of the Northern Association; Mr. Wyatt Papworth [F.]; Mr. A. N. Paterson, M.A. [A.]; Mr. H. A. Pelly [A.]; Mr. Francis C. Penrose, M.A., F.R.S., F.R.A.S., *President* (*Royal Gold Medallist*); Mr. H. R. Perry [A.]; Dr. J. S. Phené, F.S.A. [F.]; Mr. F. S. Philpot; Mr. C. J. Phipps, F.S.A. [F.]; Mr. Beresford Pite [A.]; Mr. Rowland Plambe [F.]; Mr. W. W. Pocock [F.]; Mr. F. W. Porter [F.]; Mr. Horatio Porter, M.A. [A.]; Mr. W. H. Precece, C.B., F.R.S.; Mr. A. N. Prentice [A.]; Mr. F. G. Hilton Price, F.G.S., Director of the Society of Antiquaries; Mr. H. W. Primrose, C.S.I.; Mr. John S. Quiller [F.]; Sir Robert Rawlinson, K.C.B., President of the Institution of Civil Engineers; Sir Benjamin W. Richardson, F.R.S.; Mr. W. B. Richmond, A.R.A.; Mr. T. M. Rickman, F.S.A. [A.]; Mr. Lacy W. Ridge [F.]; Mr. R. B. Rowe, F.S.A. [F.]; Mr. P. Sabel; Mr. Joseph Sawyer [F.]; Mr. E. Seward [F.], President of the Cardiff, South Wales, & Monmouthshire Society; the Right Hon. G. J. Shaw-Lefevre, M.P., President of the Local Government Board; Mr. John Slater, B.A. [F.]; Mr. R. Elsey Smith [A.]; Mr. P. Gordon Smith [F.]; Prof. T. Roger Smith [F.]; Mr. Lewis Solomon [F.]; Mr. Henry Spalding [F.]; Mr. R. Phené Spiers, F.S.A. [F.]; Mr. G. A. Spottiswoode [H.A.]; Sir John Stainer, Mus. Doc.; Mr. A. R. Stenning [F.]; Mr. J. J. Stevenson, F.S.A. [F.]; Mr. Coutts Stone [F.]; Mr. W. Larnier Sugden [F.]; Mr. Arthur Sykes [A.]; Mr. Benjamin Tabberer [F.]; Mr. Henry Tanner [F.]; Mr. John Taylor [F.]; Mr. Yeoville Thomason [F.]; Mr. E. Maunde Thompson, C.B., D.C.L., Principal Librarian of the British Museum; Mr. Frederick Todd [F.]; Colonel Trollope; Mr. John Trotter; Sir Charles Turner, C.I.E.; Prof. Unwin, F.R.S. [H.A.]; Mr. R. F. Vallance [F.]; Mr. James Walker, C.I.E.; Mr. Alfred Waterhouse, B.A., *Past President* (*Royal Gold Medallist*); Mr. Paul Waterhouse, M.A. [A.]; Mr. T. H. Watson [F.]; Mr. Aston Webb, *Vice-President*; Mr. Thomas Wells [A.]; Mr. William H. White, *Secretary*; Rev. J. B. Wilson, M.A.; Mr. E. M. Wimperis, R.I.; Mr. J. T. Wimperis [F.]; Sir Henry Trueman Wood; Mr. W. Woodward [A.]; Mr. R. Selden Wornum [F.]; Mr. William Young [F.]; Monsieur J. Van Ysendyck (*Hon. Corr. M.*); Monsieur M. Van Ysendyck; with representatives of *The Times*, *The Builder*, *The Daily News*, and the Central News, Limited.

The Duke of Westminster, K.G., Sir Francis Sharp Powell, M.P., and the late Sir Henry Layard, G.C.B., all Honorary Fellows, who were invited, had expressed a desire to be present, but were prevented from carrying out their intention; and at the moment of sitting down to dinner, the Dean of St. Paul's, who was ailing, called to express personally to Mr. Penrose his regret at being unable to join the party. The Lord Mayor, the President of the Incorporated Law Society, Sir John Hutton, and Mr. Markby had also accepted invitations, but were unable to be present. Professor Hayter Lewis, F.S.A., *Past Vice-President*, Mr. J. L. Pearson, R.A. [A.], Mr. Hepper, President of the York Society, Mr. C. B. Arding [A.], Mr. Gruning [F.], Mr. H. Hardwicke Langston [A.], and Mr. H. S. Legg [F.], all of whom had taken seats, were prevented from attending.

At 7.30 p.m. Grace was said by the Ven. Archdeacon Farrar, and at the close of dinner,

sung by the "Dilettante" Vocal Quartette. The President then gave "The Queen," which was followed by the National Anthem; and after that "The Prince and Princess of Wales and the rest of the Royal Family," alluding in the course of his speech to the fact that the Prince had been "Patron" of the Institute for more than thirty years, and that both the Duke of Saxe-Coburg-Gotha and the Duke of Connaught had been Honorary Fellows since 1879. The toast of "The Houses of Lords and Commons" was given by the Dean of Rochester in a humorous speech, which was loudly applauded, and responded to by the Lord Bishop of Ely and the Rt. Hon. G. J. Shaw-Lefevre, M.P.

The toasts of "Literature, Science, and Art" and of "The Royal Institute of British Architects and the sixteen Allied Societies" then followed, a report of which is here given:—

H.E. THE HON. THOMAS F. BAYARD, Ambassador of the United States.—My Lords and Gentlemen, the toast I have been entrusted to propose is "Literature, Science, and Art," nothing less than three of the great elevating and humanising forces of the world; for these three generate that liberation and liberality of thought, that universality of perceptions, tastes, and habits, among mankind which thus become the best hope and basis for a common purpose and understanding among men, and may justly be called the chief jewels in the crown of higher civilisation. Literature, Science, and Art are the inveterate and invincible foes of ignorance, selfishness, and those blind passions out of which brute force and stupid contention are evolved, and by which peace and justice are driven from their proper use in the diplomacy of nations. The liberal Arts are the Arts set free—the thoughts of men led forth, liberated, and marshalled for free expression, sometimes in words, clothed in letters; sometimes in sculpture—in

The brass that seems to struggle,
And the stone that seems to speak;

sometimes canvas is the field on which thought sows its seed, in the splendour of colour or the marvel of form; sometimes, marshalled into action, Science claims as her own these children of the brain and soul. But in such an assembly as this, the lines of delimitation between this great trinity of human perceptions grow dim and faint, and are so blended in a common atmosphere of fellowship and in a current of co-operative intent and purpose, that Literature, Science, and Art seem interchangeable expressions with a single meaning. *Nisi soluta non agunt* may be a maxim of the chemists, but it is equally true of other forces than the material. Literature, Science, and Art cannot live, or certainly cannot expand, or attain their full stature, if bound by the fetters of political partisanship, personal animosities, or mercenary and selfish association

—such things have no place here. The death of nations approaches when great thoughts die, and, if I comprehend its objects, this Society was intended to nourish and strengthen such thoughts, to organise intellect, and create here a centre for its manifold operations. The Graces and the Muses are natives or inhabitants of no single country, but seek and find their homes in human hearts everywhere. Their favourite home is in that country which is inhabited by the noblest minds; but any human being can put himself on terms with them if he has a heart for such work, and salutes them with truth and respect; for a man can always select his own influences. But, pardon me if I have forgotten that it is mine only to propose, not to respond, for that is happily left for other hands. Words of my own failing, I seek in my own land, and in the words of one of its sweetest singers, the needed invocation. Let me quote Whittier—

As if some Pantheon's marbles broke
Their stony trance, and lived and spoke,
Life thrills along this alcoved hall—
The lords of thought await our call.

And this figure of speech is to-right made a sober and delightful reality, for we can call the living lords of thought to respond to the lofty summons of your toast—and to answer for Literature, in the name and by the mandate of your Society, I summon the Bishop of Peterborough; for Science, Lord Kelvin will respond; and for Art, Mr. Alfred Gilbert, R.A.

THE BISHOP OF PETERBOROUGH.—My Lords and Gentlemen, I am in the unfortunate position of an advocate who would be disavowed by his clients. I have, it is true, disfigured paper with printer's ink; but no one ever calls me a man of letters, save in the genial mood which is engendered by dinners in reference to all things except politics. The subject which I have chosen to treat floats in a melancholy limbo. Science will have nothing to say to history, because its material, the doings of mankind, is tainted with ineradicable inaccuracy. Literature looks askance on history, unless it be condensed into epigrams, or resolved into picturesque descriptions of unimportant but dramatic events. The historian, who pursues the humble object of finding out what was the business of the world and how it was done, is led to the conclusion that it was as tedious in the past as it is in the present. He discovers in the records of the past the same proneness to what I may call inaccurate statement which we recognise in the political utterances of to-day. We notice this inaccuracy, I observe, chiefly in the arguments of those whose conclusions are different from our own. But the historian, whose only object is to discover the truth, must notice them on all sides. He can only enliven his pages by imparting to them some of the dreariness which is consequently created in

his own mind. I would, however, hasten to assure you that his conscience does not compel him to adopt the same high object when he is suddenly called upon to represent Literature, on whose chartered freedom of imagination he often casts a longing glance. How am I to express the gratitude of the varied and distinguished body for whom I speak? There is present one of our chief men of letters, Mr. Thomas Hardy, whose first literary work was an essay which obtained a prize given by this Institute. He would have told you how much he had learned from his architectural training, how it taught him that quickness of observation and that power of analysis which have enabled him to depict so skilfully the various features of English landscape. I could not do better than pursue this subject and point out some analogies between men of letters and the members of that great profession whose guests we are to-night. Now there is a current myth that all young architects begin by designing houses of exquisite symmetry, which is obtained by omitting windows in staircases and passages. I do not know if this be true; but men of letters often begin their career by sacrificing light to beauty. They construct epigrams which sound well till you look, and then you can see nothing in them. This is a superficial analogy; but if we go further we find that literary activity, free as it seems to be, is directed and limited by the same causes as affect the architect. There are poets innumerable. It is impossible to pick up a volume of modern verse and not be struck by great literary dexterity, command of form, and frequent felicity of expression. Yet poets complain that they are little read, and that the complexity of modern life does not present one supreme motive which is capable of large treatment. Do not architects make the same complaint? Their wealth of imaginative decoration is seldom called for: their finest designs rest unused in their portfolios. Men rarely ask for great monumental buildings, but for a supply of their current needs in forms which are necessarily tentative and slight. More lucky than the poet in his public is the novelist, who, frankly accepting life as it is, tries to express some moment in its development. Never were heroines so articulately virtuous or so persuasively didactic; never were heroes more unconscionably courageous; never were villains more subterranean in their plots or more conclusively routed by the bewildering acuteness of the detective. Architects are limited by actual facts, and cannot rise to such heights of audacity; but, like the novelist, they are endeavouring to find expression for the varying shapes of human activity. Happiest among men of letters are the critics, whose function it is to connect the present with the past and preserve a standard of literary attainment. It is theirs to interpret and to adjust, to bring the great thoughts of all times into rela-

tion with modern life. We cannot be too thankful for their assiduous care in teaching us our own littleness, and bidding us bow down before unknown worthies whom from time to time they resuscitate or discover. The work of an architect ought to make him his own critic. He has to restore or adapt an ancient building. He ought to be sufficiently humbled by the careful study of a monument of previous skill. In case he should not be sufficiently aware of his own insignificance, the Society for the Protection of Ancient Buildings has undertaken to teach him due humility. I fear that I have wandered to a painful subject. Let me notice only one other analogy between Literature and Architecture. Both are frankly democratic; they appeal to all men, and try to reach the mind through the eye. Their merit lies in their power to attract, to captivate, to lift men outside their surroundings and teach them to see and think for themselves. Men of letters and architects alike are taught by experience the same lesson. They begin by hoping to be original; they learn that, when a motive has been expressed as well as it can be expressed, there is no going beyond. Nature teaches the architect one great truth—that it is the trivial, however ingenious it may be, which soonest perishes. That work lasts longest which is constructed on the simplest and soundest principles, which are often also the oldest. It is the highest merit of our literature of to-day that, amidst its apparent luxuriance, its chief exponents hold fast to those great primal truths which

Teach high thoughts and amiable words,
And worthiness and a desire for fame,
And love of truth and all that makes a man.

In the name of that literature I tender you hearty thanks.

LORD KELVIN, P.R.S.—My Lords and Gentlemen, I cannot forget that Architecture was the first practical application of science. I have always felt, in respect of mere dynamical science, that it was difficult to imagine how our predecessors, three or four thousand years ago, succeeded in cutting out the obelisks and other great monoliths from the native granite, in conveying them to their destined sites, and in raising them up to stand on end. Dynamical science originated in those works; but science did not end there. Since those earliest times we have had the building of monuments, temples, cathedrals, town-halls, houses of parliament, and bridges. This last bridge, the Tower Bridge of London, is not only a beautiful architectural work; it is a triumph of mechanical science and engineering skill, carried out under Mr. Wolfe Barry, whom we are glad to see among us to-night, and his able coadjutor, Mr. Henry Brunel, adding lustre to names already made illustrious in architecture and engineering by their distinguished fathers. And what are we to say of the houses of modern

London? They are full of engineering science ancient and modern—some of it good, some of it not good; good hydraulics, good heating by open fires, bad arrangements for giving them air, miserable attempts at ventilation; good very new hydraulic and electric lifts; and best of all, good electric light. It is to be desired that architects should feel, more perhaps than they have felt in the past, that their beautiful province is not merely a decorative art—an art which covered their country with beautiful objects; but rather with objects which, while they are beautiful, must also be useful. Houses, too, must not only be useful but be healthy, and science should be applied in all details in the most thorough manner by architects. I dare, therefore, to ask you to consider Architecture not simply as a beautiful art, but also as a magnificent application of science.

MR. ALFRED GILBERT, R.A., briefly responded for "Art."

SIR FREDERIC LEIGHTON, Bart., P.R.A. [H.A.].—Mr. President, my Lords and Gentlemen, it is my privilege to-night to propose to you a toast which cannot fail to elicit at this table the warmest and most cordial response—it is Prosperity to the Royal Institute of British Architects, and to those other Bodies, sixteen in number, drawn from an area embracing two hemispheres, and extending from Dundee to New South Wales, which are allied to it in one common purpose. This privilege, honourable as it is, carries with it in my case considerable elements of embarrassment. Were it my duty to convey only my personal feelings towards the Council and members of this body it would be a simple task to express once again, as I did on a recent occasion, my respectful gratitude for a signal honour which it was their pleasure to bestow on me a week ago—an honour of which, keenly as I felt it, I showed my appreciation, with the ingratitude which marks mankind, by discoursing to them at no small length on the subject of their own art, as if, forsooth, I were one having the slightest quality and title for authoritative utterance in respect of it. But I have risen not in my own name, but as the mouthpiece of the sentiments which animate all those who are honoured to-night with the hospitality of this Institution. And, Sir, when Mr. Macvicar Anderson laid on me your command that I should propose this toast, I seemed for a moment to trace in your action some lurking grain of that sense of humour and impulse to satire which gave often so special and racy a spice to the work of the architects in mediæval times, for you were aware, Sir, that I am unfortunately without any personal knowledge of the inner working of this Institution to which you ask me to address my brief remarks to-night. I know, indeed, as all know, that it celebrates this day the sixtieth year of a constantly growing public activity; I know that it

exercises certain important public functions; I know that it publishes, at rapid intervals, a very interesting Journal covering the whole area of its operations. Beyond this, I fear I must own—and as an Hon. Associate I own it with contrition—my knowledge does not extend. Was it your intention, Sir, delicately to hint that in the days in which we live knowledge of a subject is not a condition antecedent or indispensable to public speech or printed utterance? And yet, Gentlemen, viewing the matter from higher ground than that of detail, I am bold to think that there is a fitness in your permitting me to propose this toast, for it is the essence of your duty and function as a body that you should promote the interests—the highest interests—of one of the noble Trio of those Arts to which it has been given in the days of their splendour to fill the world with their radiance. Who, then, can more deeply feel the dignity and responsibility of such a function, or more warmly wish you God-speed in its fulfilment, than the representative of a great institution which embraces those three arts in its care, and one who, while clearly affirming their distinctive attributes and characteristics, yet sees how great is the gain to each in a close spiritual communion, and himself loves and cherishes them with an equal love and reverence? And let us in drinking and appreciating this toast keep before us the peculiar and far-reaching scope and power of this great building art. To painting and to sculpture, as to music and architecture, it is given to transport the spirits of men into regions of noble and sweet emotion, and they do so through the suggestive treatment of the forms and hues of animate and inanimate creation. Like music, they lift and adorn life; like it, they are not based on any necessity other than the need of men for spiritual food. With your art it is otherwise; it grapples more closely with life, for it is rooted in the soil of necessity; it provides primarily for material wants; to it is conceded the high faculty of infusing into the thing of necessity the divine afflatus and essence of beauty, and of making, if nobly used, the inevitable surroundings of our lives—the roof over our heads, the walls that shelter us, the buildings in which we pray, govern, teach, trade, or take our leisure—yield quickening and satisfying nourishment to our highest æsthetic instincts and perceptions. To such and so great an Art do you minister. May you long thrive under your weighty and responsible task! And let me couple with this toast the name of the distinguished and accomplished gentleman who only the other day yielded the Presidential chair to the eminent and learned exponent of the principles of Athenian architecture. I have not the knowledge, nor would it become me, to speak of the special qualifications Mr. Macvicar Anderson brought to his arduous duties; it is more to the

point that golden words concerning him are on the lips of all his fellow-workers. I only may be allowed to note the constant and graceful courtesy of which I have so often had personal and pleasant experience at his hands.

MR. J. MACVICAR ANDERSON, *Ex-President*.—Sir Frederic, my Lords and Gentlemen, I should not have ventured to respond for this toast in the presence of my revered friend the President, had not Mr. Penrose himself desired me to do so. With that native modesty which is the appropriate characteristic of a distinguished man, he may have thought that one who has just assumed the reins of government is likely to be less conversant with the affairs of the Institute, and less competent, therefore, to speak of them, than one who has occupied a position of responsibility for the last three years. Be that as it may, I have regarded the wish of the President as a command, and must therefore seek your indulgence, while, in his presence, I endeavour to reply to the important toast which has been so appropriately proposed by the President of the Royal Academy. Sixty years since, the first meeting of what afterwards became the Royal Institute of British Architects was held in the Thatched House Tavern. The meeting was small, but the names of those who composed it were not unknown to fame. There was Charles Barry—afterwards Sir Charles—whom I have more than once designated as in my judgment the greatest English architect this century has produced, happily still represented among us by a son, who bears his name, the past President of the Institute, and by a younger son—our guest this evening—whose ability in carrying to successful completion one of the engineering feats of modern times has just received deserved recognition. There was Donaldson, the Father of the Institute; there was Basevi, Decimus Burton, Joseph Gwilt, Philip Hardwick, Papworth—now represented by his son, the erudite Curator of Sir John Soane's Museum—and Seward, whose descendant, as President of the Cardiff Architects' Society, continues the traditions to which his relative subscribed sixty years since. Such were some of those who attended that first meeting, and who were instrumental in organising the Institute of Architects. I am well aware that in these days of Combinations, Federations, and Unions the mere reference to organisation arouses a tremor of suspicion; and not unnaturally, for I have known organisations whose first purpose was legitimate and commendable turned from their fair use, and become not blessings but curses, bringing disaster and ruin on the industries and interests which they were designed to foster and encourage. It is well, therefore, to state that the Royal Institute of British Architects was founded, and is maintained, not for the benefit of architects, but for a far higher purpose which every true architect

desiderates—the promotion of Architecture. How important to the public is such a purpose you will readily recognise. If you possess pictures or groups of sculpture, and if from change of taste or change of fortune you desire to part with them, transference to “Christie's” will readily dissipate anxiety as to your possessions. If great compositions of past masters in music, which once delighted, have lost their charm, you need not listen. If literary works of favourite authors have ceased to rivet the attention they once commanded, you can close the page. But with Architecture it is far different. When once the ideal of the architect has become crystallised in material and enduring form, it remains, from year to year, and passes from generation to generation, creating in the minds of beholders emotions of hope and gladness, or, it may be, alas! of depression and despair. How desirable, then—nay, how essential—that all that can be done should be done to promote what is true and good and beautiful in Architecture. I may be asked, what has the Royal Institute of British Architects done in this direction? On this subject I could speak volumes. Readily recognising, however, that to enter fully on technical details in an after-dinner speech would be unpardonable, I confine my remarks to one or two points only. The founders of this Institute, to whom I have already referred, with that reverence for the works of past ages which form so indispensable a feature in the study of any art, recorded their conviction that their primary efforts should be directed to the formation of a library of reference. Were it possible for any of them to look in at Conduit Street now, they would admit that their aspirations had been amply realised in our Library of to-day, which, so far as I know, is second to none in point of interest or of value to students of Architecture. They anticipated that the meetings and the publications of the Institute would become the means of communicating what might be curious and interesting to the public and to the profession. I doubt not that they would frankly recognise that our meetings and our publications are so conducted as to convey useful information in an intelligent form both to architects and to the public. Again, the Institute has been an active agent, especially of recent years, in fostering and encouraging the great cause of education, by having called into existence, as the result of its policy, facilities for study and for the acquisition of knowledge, not merely in the metropolis, but throughout the length and breadth of the empire, by means of its Allied Societies. Further, by offering year by year prizes, bursaries, and travelling studentships of considerable value, the Institute seeks to bring to light the latent talent of the rising generation; while, by the annual presentation of a gold medal, the gift of Her Majesty the Queen, it seeks to recognise merit in older men, who have made their mark in

Architecture or in the arts and sciences connected therewith. It is the glory of this medal that it is not restricted to English architects, but is conferred on distinguished men of any nationality. Only a few days since it was presented by the President, with the full approval of Her Majesty, to one who is accepted as the typical representative of the fine arts in this country, Sir Frederic Leighton, not for his work as a painter or a sculptor, but for those remarkable addresses to students which for the last few years have tended so directly to promote the knowledge of Architecture. I have pointed to what I may call the "pious intentions" of those founders of the Institute who met for the first time this night sixty years since, and I have shown briefly—but I hope convincingly—how these intentions have been realised. One only, through no fault of ours, remains to this day unfulfilled. These are the words in which it was expressed: "It may not, perhaps, be assuming too much to suppose that, as in the case of other societies certainly not more important to the community, the Government will . . . afford to the Institute a place for holding its meetings and depositing the collection it may acquire." Government has succeeded Government for sixty years, but these words are still as a dead letter. Is it too much to hope that my words may yet fall like good seed on receptive soil, and that Her Majesty's Government, by repairing the omission, may thus enable us to devote our resources more unreservedly to the cause in which all branches of the community have so direct an interest—the promotion of Architecture? I may not detain you longer. On behalf of the Royal Institute and of our Allied Societies, I have to proffer grateful acknowledgments to you, Sir Frederic Leighton, for the kind and eloquent terms in which you have proposed the toast, and also to this company for the cordial manner in which it has been received. I do so all the more heartily because I am well assured that in drinking prosperity to the Royal Institute of British Architects and our Allied Societies you have in truth wished prosperity to the great, the noble, the elevating art, which it is at once our privilege and our glory to represent.

MR. ALFRED WATERHOUSE, R.A., having toasted "The Representatives of Corporate Bodies and other Visitors," Sir John Stainer, Mus. Doc., responded. Lord Kelvin then gave the health of the President, and alluded to Mr. Penrose's recent election to the Royal Society. The President's reply terminated the proceedings at about 11.30 p.m.

THE STREETS AND BUILDINGS BILL.

Proceedings before the Select Committee [p. 602].

After some twenty sittings of most patient investigation the Select Committee of the House of Commons have reported this Bill, but in a very

different shape from that first presented to the House.

On the 28th ult. the much-contested Part IV. was opened by Mr. Cripps, Q.C., with explanations which appeared to foreshadow a desire on the part of the promoters to conciliate the opposition so decidedly expressed to this Part, even in its reduced and amended form.

Dr. Longstaff, who has throughout been the champion of the Bill, and practically the sole witness of any importance put forward by the promoters, gave evidence in support of the measure, contending that the action of the London Council was justified by the Model Bye-laws now in force in many towns with an aggregate population of 2,750,000 persons.

On the 29th ult. Dr. Longstaff's cross-examination proceeded, affording him further opportunity of defending the proposed legislation. Dr. Shirley Murphy, the Medical Officer of Health to the London Council, gave evidence as to the increase of diseases of a certain kind with the density of the population, and cited examples of recently erected model dwellings which were, in his opinion, insanitary. Dr. Ransome, of Manchester, followed with the usual array of statistics, which had evidently done service in many lecture-rooms, but was quickly disposed of. He was succeeded by Dr. Marshall Ward, Professor of Botany at Cooper's Hill, who has recently aroused so much interest at the Royal Society and the Royal Institution by his discourses on the effect of sunlight on bacteria. Dr. Ward produced the striking results of his experiments on the anthrax bacillus, which, although unaffected by boiling at 68° Cent., was killed by sunlight and even by the arc-light. He had had, however, no experience of the action of typhoid or cholera bacillus under like circumstances; his evidence, consequently, availed but little. The last witness of the day was Mr. Goldstraw, chief of the building-surveyors employed by the Corporation of Liverpool, who came up to praise the Model Bye-law system in force at Liverpool, and to say that Part IV. was, on the whole, fair and satisfactory. He admitted, however, that in 1893 the death-rate of Liverpool was 24·7, while that of London, which was to be improved up to the Liverpool standard, was only 20·6!

At the seventeenth sitting, on the 2nd inst., Mr. Bruce, Chairman of the Housing Committee of the London County Council, and the last witness called for the promoters, denounced the present state of the law as disgraceful in permitting the re-erection of insanitary buildings on closed sites.

The case for the County Council on Part IV. was thus closed without one technical or professional witness—excepting only their own Officer of Health—having been put forward to support the attempt of the London Council to impose on London legislation of a most destructive and oppressive character. The proposed measure has been sub-

ject to continuous modification and reduction in the face of a most formidable opposition. Enormous costs and expenses have been imposed on those public-spirited persons and corporate bodies who have come forward to protest against the Metropolis of the Empire being reduced to the level of a third-rate provincial town, and against the obstacles to be thrown in the way of architectural improvement, which would result in an all-pervading meanness of elevation with no compensating sanitary advantage.

The first witness for the opponents was Mr. Ralph Clutton, who dealt with new sites and the limiting angle, and the open spaces being only required above the top of the ground floor. Mr. Arthur Cates [*F.*] followed with large coloured diagrams, showing conclusively what would have been the effect of the proposed restrictions on well-known buildings recently erected in the West End, and how improvements contemplated in the near future would be rendered impossible if Part IV., even in its amended form, became law. Mr. Charles Fowler [*F.*] expressed the view that a hard-and-fast line should not be enforced, and illustrated the grounds of his opposition by examples from the Portland Estate. Mr. Marsh illustrated the effect on City properties; Mr. Dickins on small properties, working-men's houses, &c. Mr. George Trollope urged that there was no necessity for such legislation, and that it would seriously affect the building trade. Mr. W. D. Caröe [*F.*], from his knowledge of Liverpool, very neatly showed the weakness and inapplicability of Mr. Goldstraw's evidence, and objected to the limiting angle as leading to bad construction—a long sloping roof at back involving increased danger from fire, while a stepping back necessitated expensive construction by girders on each floor. Mr. D. C. Nicholls supported and confirmed the preceding witnesses.

At the eighteenth sitting, on the 3rd inst., Mr. Eustace Balfour [*F.*] illustrated, from instances on the Duke of Westminster's estate, the mischievous effect which would result if the Bill became law. Mr. A. R. Stenning [*F.*] gave similar instances from the City of London, and characterised the proposed legislation as most unfair, and calculated to diminish the value of property in the city.

Mr. Danekwerts, Mr. S. Pope, Q.C., Mr. Russell Griffiths, Mr. Grain, and Mr. Littler, Q.C., then addressed the Committee against the clauses. Mr. Cripps, Q.C., having replied, promised to bring up new clauses to meet the objections as far as possible.

At the nineteenth sitting, on the 5th inst., ten new and amended clauses were brought up, and after some discussion held over for consideration at the next sitting.

Part XII., Clause 130.—The status and position of District Surveyors, and the question as to whether they should be debarred from private practice, were then considered. Mr. W. D. Caröe

gave excellent evidence with telling effect. After making good use of the petition of the Institute on this point, and forcibly expressing the views of the Institute Council, he went on to illustrate the result of the conditions imposed by the London Council in 1890, by the number of candidates who came up for certificates. In the eight examinations before 1890, there were sixty-seven candidates, and in seven examinations held during 1890-93 there were only twenty-eight. In October 1893 and April 1894, when examinations should have been held, there were no candidates at all. Mr. Charles Fowler, Mr. Eustace Balfour, and Mr. J. Douglass Matthews supported Mr. Caröe's contention.

There was much apparent confusion of mind on the part of some members of the Committee as to the exact position of District Surveyors, and the cases of Borough Surveyors and like salaried officers were cited as analogous. In the end an amendment proposing to grant District Surveyors the right of private practice was negatived, and, on the other hand, the objectionable words in Clause 130, sub-clause c, "Such appointment to be subject to such conditions as the Council may think fit," were struck out. The matter consequently remains as it stood before the London Council attempted to legalise their recent action by the introduction of the words now eliminated.

At the twentieth sitting, on the 6th inst., the new and amended clauses of Part IV. were considered, and as the Chairman had announced that this would be the last sitting of the Committee, all parties speedily arrived at more or less agreement on their revision, the opponents reserving their right to oppose in another place should they consider it necessary upon further examination of the clauses. Evidence was given on a variety of points. The Chairman ruled that the limiting angle, now $63\frac{1}{2}^{\circ}$, was a cardinal principle of the Bill, and that nothing further against it would be allowed.

The proceedings before the Select Committee have thus terminated, and the result clearly shows that had the London Council consented to discuss Part IV. and the contentious portions of Part I. with the delegates of the Royal Institute of British Architects and the Surveyors' Institution, a much more satisfactory result would have been obtained, a great waste of the ratepayers' money avoided, and the public-spirited opponents of the Bill spared the enormous expenditure incurred in order to protect London from the mischievous and impracticable propositions put forward.

Much credit is due to the learned Chairman of the Select Committee, Mr. Stuart Wortley, Q.C., for the patient attention he has given to the complicated questions discussed, and for his earnest endeavours to arrive at an equitable result. The public are largely indebted to him for the great improvements made in the measure.

The Bill has been again reprinted in accordance with the final decisions of the Committee, and was read a third time in the House of Commons on the 16th inst. [p. 603]. It will now go up to the House of Lords for further consideration and revision before a select Committee of that House.

The arrangement of the Bill as reprinted is different from that first introduced. Parts I., II., and IV. have become Parts II., III., and V. respectively, and the clauses throughout have been renumbered. It is probable that the renewed consideration which Parts II. and V. will receive in the House of Lords will lead to further amendments.

The spirit of the clauses affecting new buildings and rebuilding may shortly be given thus, adopting the new numbering:—

Part II.—Formation and Widening of Streets.

Clause 10.—Sub-section 4 provides that before any person commences to widen any part of a street less than 40 feet or 20 feet wide respectively on either side to a less extent than the prescribed distance, i.e., 20 feet from the centre of the road for streets adapted for carriage traffic, and 10 feet from the centre for footways, he shall give notice in writing to the Council, with a plan of the proposed widening, and shall not, except with express sanction of the Council, commence to execute such widening until two months from the date of the notice.

Clause 12 authorises the Council, where they deem it expedient in the public interest that the street, by reason of its length or importance, or of its being likely to form part of an important line of communication, or for other sufficient reason, should be of greater width than 40 feet, to direct that any street, not being within two miles of St. Paul's, about to be formed or laid out, or about to be adapted for carriage traffic for the first time, may through-out or in part be of a greater width than 40 feet, but not more than 60 feet.

Clause 13.—Sub-section 1 provides that no new building or its external fence or boundary of the forecourt shall, without the consent of the Council, be nearer than the prescribed distance from the centre of the roadway.

Sub-section 2 empowers the Council, after consulting the local authority, to require a greater distance than 20 feet, but not exceeding 30 feet from centre of roadway. This sub-section is not to apply to any street within two miles of St. Paul's.

Sub-section 3 gives liberty of appeal to the Tribunal of Appeal against the determination of the Council.

Sub-section 5 provides that where any person intends to alter or re-erect a building existing at the commencement of the Act or seven years previously, which may not be in conformity with the provisions of this section, he may cause plans to be prepared showing the extent and height of such building in its several parts, and the extent of the forecourt, to be certified as correct by the District Surveyor. He shall then be at liberty to alter or re-erect such building; but so that no land within the prescribed distance shall be occupied by the building or forecourt except that previously so occupied, and that the altered or re-erected building shall be in no part of a greater height than the height hereinafter prescribed [now settled at 80 feet]. If such plans are not submitted, or if the District Surveyor or the Tribunal of Appeal decline to certify their accuracy, the site and building are brought within the preceding provisions of the section. No dwelling-house to be inhabited or adapted to be inhabited by persons of the working class shall, without the consent of the Council, be erected or re-erected within the prescribed distance, and

no building shall be converted into such dwelling-house within the prescribed distance.

Clause 15 provides that where, in the case of the formation or laying out of a street over land which at the commencement of the Act or seven years previously has been occupied by buildings, or where, in the case of the adaptation for carriage traffic of any street or way not previously so adapted or used, the Council shall require a greater width than 40 feet, or that the prescribed distance shall exceed 20 feet, the Council shall be liable to pay the owner compensation for the loss or injury (if any) sustained by him by such requirement. The amount, if not agreed to, to be settled by arbitration according to the provisions of the Lands Clauses Act.

Clause 18 provides for copies of the printed regulations of the Council relating to this part of the Act being kept at the principal office and supplied at all reasonable times without charge to any applicants for them.

Clause 19.—Any applicant for sanction to the formation or laying out or adaptation of a street, or for the certificate of a District Surveyor, who may be dissatisfied with the refusal or conditional grant of such sanction or with any condition imposed by the Council or with the refusal of such certificate, may appeal to the Tribunal of Appeal.

Part III.—Lines of Building Frontage.

Clause 22 provides that no building shall, without the consent of the Council, be erected beyond the general line of buildings certified by the superintending architect.

Clause 23 empowers the Council to set back any building projecting beyond the general line of buildings, which may have been taken down to an extent exceeding one-half of its cubical extent, or otherwise demolished, to such line as they may direct, subject to payment of compensation, which, in case of difference, is to be determined by arbitration as provided by the Lands Clauses Acts.

Clause 25 provides for appeals to the Tribunal of Appeal against the certificate of the Superintending Architect.

Clause 30 provides that this part of the Act shall not apply within the City.

Part V.—Spaces at Rear of Buildings. Spaces about Buildings not Fronting on Streets. Height of Buildings.

Clause 38 enacts that with respect to domestic buildings erected after the commencement of the Act, and abutting on a street formed or laid out after that time, there shall be provided in the rear of such building an open space, exclusively belonging thereto, of an aggregate extent of not less than 150 square feet.

In certain specified and exceptional cases such open space may be provided wholly or in part above the level of the ceiling of the ground-floor storey. In all other cases the open space shall be free from any erection above the level of the adjoining pavement, except a water-closet, &c., not exceeding 9 feet high. Such open space shall extend the entire width of such building, and to a depth in every part of at least 10 feet from such building.

The height of any such building in relation to the space required in the rear thereof shall be determined by a diagonal line drawn from the boundary of the space furthest removed from the roadway in front at the level of the pavement of such roadway at $63\frac{1}{2}^\circ$ as the limiting angle, above which line no part of the building except only chimneys, dormers, &c., shall extend. When the land at the rear of such building abuts immediately on a street, the diagonal line or limiting angle may be drawn from the further side of such street at the level of pavement, and the open space may be provided on any part of the land.

In the case of corner sites the Council may, subject to certain provisions, permit the erection of buildings not exceeding 30 feet in height upon such part of the space in the rear as they may think fit.

With respect to domestic buildings erected after the

commencement of the Act abutting on a street formed or laid out before the commencement of the Act, the provisions of the section are to apply, with the modification that the diagonal line or limiting angle of $68\frac{1}{2}^\circ$ shall start from the level of the ceiling of the ground-floor storey instead of the level of the pavement in front.

Clause 39 gives to the Council power of control over the plans for dwelling-houses to be inhabited or adapted to be inhabited by persons of the working class erected after the commencement of the Act not abutting on a street, with liberty of appeal to the Tribunal of Appeal from the refusal of the Council to sanction the plans, or against any of the conditions prescribed by the Council.

Clause 40 would appear to apply to every case of rebuilding throughout existing London, and provides that when any person intends to erect a domestic building (not a dwelling-house to be inhabited by persons of the working class) abutting upon a street, on the site of a domestic building existing at the commencement of the Act, or on a site then vacant, but which has been occupied by a domestic building at any time within seven years previously, it shall be lawful for such person, before commencing to erect the intended domestic building, to cause to be prepared plans showing the extent and height of the previously existing building in its several parts, and may cause such plans to be submitted to the District Surveyor, who, if reasonably satisfied of their accuracy, shall certify the same under his hand. Such person may then erect the intended domestic building, but so that no land shall be occupied by the newly-erected building except that which was occupied by the previously existing domestic building as so certified, and that such newly-erected building shall be in no part of a greater height than the height hereinafter prescribed. If such person should fail to submit such plans to the District Surveyor, or should the District Surveyor or the Tribunal of Appeal decline to certify the accuracy of the same, he shall, in rebuilding, be bound by the preceding provisions of this part of the Act relating to domestic buildings abutting upon a street formed or laid out before the commencement of the Act.

If a deviation is desired in any respect from the plans certified by the District Surveyor, the Council shall sanction such deviation on such conditions as they may think fit, provided such conditions do not in any case exceed the conditions prescribed for new dwelling-houses abutting on a street formed or laid out before the commencement of the Act.

In the case of new streets over old sites, or the widening of existing streets, the Council have certain dispensing powers.

A person dissatisfied with any decision of a District Surveyor under this section may appeal to the Council, who may make such order as they may think fit, and any person dissatisfied with any such order may appeal to the Tribunal of Appeal.

Clause 44, in terms similar to the existing law (1890), limits the height of buildings to 80 feet, which thus becomes the prescribed height before referred to.

Clause 46 enacts that after the commencement of the Act no existing building on the side of a street formed or laid out after the 7th August 1862, and of a less width than 50 feet, shall, without the consent of the Council, be raised, and no new building shall, without the consent of the Council, be erected abutting on any such street so that the height of such building shall exceed the distance of the front or nearest external wall of such building from the opposite side of such street.

Part VI.—Construction of Buildings.

Clause 58 provides that every new building exceeding 60 feet in height shall be provided on the storey the floor of which is above 60 feet from the street-level with such means of escape in case of fire for the persons dwelling or

employed therein as may be reasonably required under the circumstances of the case; and no such storey shall be occupied until the Council has certified.

Part IX.—Dangerous and Neglected Structures.

Clause 101 provides that if the owner of the structure dispute the necessity of any of the requisitions comprised in the notice, he may require that the subject shall be referred to arbitration—of an independent surveyor appointed by him, the District Surveyor, and a third surveyor, as arbitrators.

Clause 102.—Notwithstanding the notice requiring arbitration, the Court may on complaint by the Council, if of opinion that the structure is in a dangerous condition, make any order for the taking down, &c., of that structure.

Part XV.—The Tribunal of Appeal.

Clauses 169-180.—The Tribunal of Appeal, by which almost every contested question arising under the Act is to be decided, consists of three members, constituted as follows:—One member appointed by a Secretary of State, one by the Council of the Royal Institute of British Architects, one by the Council of the Surveyors' Institution.

Part XVI.—Miscellaneous.

Clause 185 authorises, with the consent of the Council, the restoration of any part of an old building of architectural or historical interest in the same material and in the same design as before.

The late Austen Henry Layard [H.E.].

Sir Henry Layard, G.C.B., who died at his residence in Queen Anne Street on the 5th inst., leaves behind him a name high on the list of archaeologists and explorers. His connection with the Institute was of long standing. As far back as 1850 he was elected an Honorary Member; in 1868 the Royal Gold Medal for the promotion of architecture was conferred upon him; and in 1889, after the extinction of the class of Hon. Members, he was elected an Hon. Fellow. His Paper on Mosaic Decoration,* read before the Institute on the 30th November 1868, showed how close a student he had been of architectural decoration in all ages of the world's history, and added not a little of value to knowledge of the subject.

Austen Henry Layard, the son of Mr. Henry P. J. Layard, of the Ceylon Civil Service, and grandson of Dr. Layard, Dean of Bristol, was born in Paris on the 5th March 1817. His boyhood was passed mainly in Italy, where he was educated, and where in the society of artists and connoisseurs he early acquired a taste for the fine arts. Destined by his parents for the law, at the age of sixteen he was sent to London to qualify for that profession. Nearly six years, therefore, he spent in a solicitor's office and in the chambers of an eminent conveyancer. The law, however, was little to the taste of the future explorer. Layard was in love with the East. As a child his imagination had been stirred by the stories of the *Arabian Nights*; he had greedily read every volume of Eastern travel that he could lay hands on. While in London he had made the acquaintance of Sir Charles Fellows, whose account of his discoveries

* TRANSACTIONS 1868-69, Vol. XIX. p. 31.

among the ruined cities of Asia Minor he had listened to with keenest interest, and he yearned to follow in his footsteps. Works of famous travellers had roused in him an ardent longing to visit Persia, Babylonia, and the wild tribes of Kurdistan. In the hope that some day he might visit those countries, he had even endeavoured to master the Arabic characters and to learn something of Persian. When, therefore, a relative, a high official of Ceylon, hinted at an opening for him either at the Bar or Civil Service of that island, he seized the opportunity, anxious on any pretence to get to his beloved East.

On the 8th July 1839 Layard started for Ceylon. The beginning of the year 1842 found him no nearer his destination than Baghdad, and he had at last resolved to abandon the idea of proceeding to India. His vocation had dawned upon him. The story of his life during this period is told in his own inimitable way in a work written some forty-five years later*—a narrative teeming with adventure as daring and exciting as any on record. Then it was that he visited the ruins of Nimroud, and first conceived the design of making excavations in them should the opportunity ever arise. A few days' journey from there, he fell in with Flandin, the painter, and Pascal Coste, the architect, engaged in making drawings of the famous sculptures of Taki-Bostan, for the purpose of their great work, *Voyage en Perse*, published by the French Government in 1851.

During this time Layard became fairly proficient in the Arabic and Persian languages. Several months he spent among the Bakhtiari tribes, residing in the castle of their hospitable chief, Mehemet Taki Khan. In 1842 while at Mosul he made the acquaintance of Botta, then meditating those excavations which ended in the discovery of the Assyrian ruins at Khorsabad and the unearthing of the Assyrian sculptures now housed at the Louvre. In transferring his researches to Khorsabad, Botta had abandoned the mounds near Mosul, which were believed to be the site of ancient Nineveh. Layard was convinced, however, that the excavation of Kouyunjik, the largest of the mounds, would lead to important finds. He had endeavoured, without success, to induce an English merchant to undertake the work, fully assured that the objects of antiquity discovered would amply repay the expense.

Not till three years later, in 1845, was Layard able to embark on his pet scheme. Sir Stratford Canning (afterwards Lord Stratford de Redcliffe), Ambassador at Constantinople, had employed him in various unofficial missions in Albania, Servia, and Bosnia; and his knowledge of the region enabled him to render great assistance in the Turco-Persian Boundary question. Meanwhile Sir Stratford had become so favourably disposed towards him and

his projects of archaeological discovery that in 1845 he generously provided him with the means out of his own pocket, and Layard was enabled to begin the work which had so long occupied his thoughts. The result is well known. Two years' digging revealed the remains of four immense palaces. The mound of Kouyunjik itself covered the great palace of Sennacherib. In that of Sardanapalus, with its alabaster-lined walls decorated with bas-relief and cuneiform inscriptions, the Royal library was brought to light in which were discovered the tablets, now in the British Museum, which contain the story of the Deluge. The inscriptions, the winged bulls and lions, and numerous other wonderful specimens of Assyrian art discovered by Layard are among the most precious contents of our National Museum. The account of these discoveries was given by the explorer in those fascinating volumes *Nineveh and its Remains* and *Nineveh and Babylon*—works which, translated into almost every European tongue, obtained a world-wide circulation. As the result of a second expedition, undertaken for the British Museum, this time with Parliamentary aid, he published in 1853 another important work—*Discoveries in the Ruins of Nineveh*. Upon his return home numerous marks of distinction were conferred upon him. In 1848 he was made a D.C.L. at Oxford; in 1853 he received the freedom of the City of London; and in 1855 he was elected Lord Rector of Aberdeen.

His exploring days over, after holding for a short time an Attachéship to the Embassy at Constantinople, Layard turned his attention to politics, with a special view to Eastern affairs. In 1852 he was returned Member of Parliament for Aylesbury, and in Lord John Russell's brief Administration of that year he served for a few weeks as Under-Secretary for Foreign Affairs. In 1854 he was again in Turkey, and witnessed many of the engagements in the Crimean War, viewing the battle of the Alma from the maintop of the *Agamemnon*, and making himself acquainted with the condition of our troops before Sebastopol. The latter was a subject he felt very strongly upon; he was one of the first to advocate a Parliamentary Committee of Inquiry, and himself gave evidence before it. In 1855 he was offered a post in Lord Palmerston's Government, but declined. Losing his seat at Aylesbury in 1857, he went to India, and spent some time investigating the causes which led to the Mutiny. In 1859 he unsuccessfully contested York, but was returned for Southwark in the following year. In 1861, under Lord Palmerston, he served again in the post of Under-Secretary for Foreign Affairs, and held the appointment till 1866. In Mr. Gladstone's first Administration (1868) he was First Commissioner of Works, and became a Member of the Privy Council. It was Layard who, believing "that the First Commissioner re-

* *Early Adventures in Persia, Susiana, and Babylon*. 2 vols. 8o. 1887. John Murray.

"quired the aid of an officer conversant in a high "degree with Architecture," appointed the late James Fergusson "Secretary of Works and Buildings," which newly-constituted office he afterwards tried to alter to "Inspector of Public Buildings and Monuments"—his memorandum thereon being dated 11th March 1869. But the Treasury refused to sanction the alteration, though at the same time consenting to abolish the office of salaried architect to the Department, then held by the late James Pennethorne.

From 1869 onwards Sir Henry Layard's career was a diplomatic one. In that year he was appointed Envoy Extraordinary and Minister Plenipotentiary at Madrid; eight years later, on the retirement of Sir Henry Elliot, he obtained the post he had always coveted of British Ambassador at Constantinople. The cession of Cyprus to Great Britain was negotiated by him, and as a reward he received the Grand Cross of the Bath.

In 1880 he retired from Constantinople, and the best part of his life since was spent in Venice, where, at his well-known house, the Ca' Capello, looking on to the Grand Canal, he surrounded himself with a fine library, a noble collection of pictures and bronzes, marbles and mosaics, tapestries, ancient furniture and bric-à-brac, relics of the past, the spoils of his long and varied career. Sir Henry was a trustee of the National Gallery. He had received the German "Ordre pour le Mérite," and—a distinction he prized above all others—he was a Corresponding Member of the Institut de France. He was a considerable authority on Italian art, many years ago having published a valuable contribution on the Brancacci Chapel. In 1887 appeared his revised edition of Kugler's *Handbook of the Italian Schools*, and he edited and wrote an introduction to Miss Ffoulkes's translation of Morelli's *Italian Painters*, published in 1892. Some of his valuable collection of paintings have been bequeathed to the National Gallery.

The late William Jackson [F.].

The following memoir of the late Mr. William Jackson, who had been a Fellow of the Institute since 1889, is kindly furnished by Mr. John Goodacre [F.] and Mr. S. Perkins Pick [A.], President and Hon. Secretary respectively of the Leicester Society:

The death of William Jackson, under peculiarly sad circumstances, has removed from our midst a well-known and accomplished member of the profession. He formed one among a small number of enthusiasts who founded the Leicester and Leicestershire Society of Architects, and was for nearly twenty years the Honorary Secretary, and up to the time of his death he retained the office of Honorary Treasurer to that Society. He manifested the keenest interest in all matters affecting the honour and integrity of architectural practice, and was for years the mainstay of the Society whose business he so ably managed.

The funeral of our late colleague, which took place on Saturday at the Leicester Cemetery, was attended by a number of personal and professional friends who desired to pay a last mark of respect to the deceased.

Mr. Jackson was a native of Leicester; he was articled to the late Mr. Parsons of that town, and after spending some time in his office he commenced practice. He erected many large buildings in Leicester and neighbourhood, including warehouses and factories for Messrs. Cooper, Corah & Co., Messrs. Stead, Simpson & Nephews, Messrs. Walker, Kempson & Brown, Messrs. Hart & Levy. The Barracks in the Newarke, the *Leicester Daily Post* and the *Mercury* offices and works, and a considerable number of dwelling-houses and other buildings in and about Leicester were designed and superintended by him.

He was a man of wide knowledge and extensive reading; an earnest student and an authority upon the archaeology and history of all the ancient buildings and remains of Leicester and Leicestershire. He contributed many valuable papers to the reports of the Leicester Society of Architects and other publications. Among these will be remembered "The History and Description of Leicester Abbey," published in the present JOURNAL [pp. 129, 166]; notes on St. Margaret's Church, St. Mary's Church, the Trinity Hospital, Kirby Muxloe Castle, the Roman pavement in Jewry Wall Street, and a very able dissertation upon the claims of Leicester for the restitution of its ancient title, namely, that of the "City" of Leicester.

A Teaching University for London.

The minutes of evidence taken by the Royal Commissioners appointed to consider the Draft Charter for the proposed Gresham University in London, with tables of witnesses and of institutions represented, have now been published, together with an appendix and analytical index. Appendices 46 to 50 consist of a collection of Papers handed in by Mr. Arthur Cates for the consideration of the Commission. These include an account of the Progressive Examinations of the Institute, with the respective programmes of the various stages; a description of the Architectural Curriculum at King's College, and the classes held there in Architecture and kindred subjects under the auspices of the Carpenters' Company; and Papers relating to the courses at the Architectural Association, London. Also particulars of the Departments of Architecture at the Cornell University and Columbia College, U.S.A.; and the Programme of the Course in Architecture at the Technical High School, Vienna. The courses of the *Ecole des Beaux-Arts* are given under Questions 22, 559A, and 22,562. That the position of architecture will be duly recognised in the proposed University by the inclusion in its senate

of a member appointed by the Institute is no doubt largely due to the evidence given by the members of the Council who attended before the Royal Commission. These gentlemen were the then President, Mr. Maevicar Anderson, Mr. Arthur Cates, Mr. John Slater, and Mr. William Emerson; their evidence is printed at pp. 1024-1041 of the Minutes.

The late W. Calder Marshall's Works.

Mr. Charles J. Marshall [A.] writes that the studios of his father, the late W. Calder Marshall, R.A., which contain a large number of his works, will be thrown open to visitors from twelve till seven o'clock, on Monday the 23rd until Saturday the 28th inst., on presentation of visiting card.

Proposed Portrait of the Ex-President.

The Council, in furtherance of what they believe to be a very widely-spread wish, have appointed a Committee to take such steps as may be deemed advisable to obtain a portrait of Mr. Maevicar Anderson to be hung on the walls of the Institute, in recognition of his untiring zeal and valuable services, ungrudgingly rendered for so many years, both as President and as Hon. Secretary. The Committee appointed to act in the matter are Sir Arthur Blomfield, A.R.A., Mr. Aston Webb, Mr. A. E. Street, M.A., and Mr. Emerson.

Additions to the Library.

Messrs. Longmans, Green, & Co., the publishers, have presented *Engineering Construction in Iron, Steel, and Timber*, by William Henry Warren, Challis Professor of Civil and Mechanical Engineering, University of Sydney, New South Wales. Professor Warren states that the special feature of his work lies in the various examples which illustrate the design of the most important classes of structures in iron, steel, and timber, which have all been selected from existing works. The Library Committee of the Reform Club have presented, through their librarian, Mr. Charles W. Vincent, a second and enlarged edition of the catalogue of their extensive and notable library, with a revised historical introduction by Mr. W. Fraser Rae, chairman of the committee. The catalogue, for completeness and ease of reference, is an excellent example of its kind. The Executive Council of the Imperial Institute have presented the *Year Book* of the Institute for 1894.

Amongst numerous pamphlets recently received, Professor Aitchison [F.] has presented two. The first of these, *Ausgrabungen in Tralles* (1888) [Gebrüder Perris, Athens, 1893], contains two papers by Carl Human and Dr. Wilhelm Dörpfeld [Hon. Corr. M.], which give an account of the excavations at Tralles, and note the recovery of three sculptures of first importance; these are a colossal head of a Dionysius, the head of an Aphrodite, and an unnamed life-size draped statue. The object of the *Orient-Comité zu Berlin*

(under whose auspices the pamphlet was published), working in co-operation with the directors of the Imperial Ottoman Museum, in the excavations of 1888, was to discover the body of the Dionysius. A description of Tralles and its ruins, and the result of the excavations, are given; the latter recording the discovery of various fragments of Grecian architecture and sculpture. *Ausgrabungen im Theater von Magnesia am Maiandros*, by Dr. Wilhelm Dörpfeld (same publisher 1894), gives an account of the excavations made and the inscriptions examined at the Theatre.

The Real Associação dos Architectos Civis e Archeologos Portuguezes have presented a biography of their founder Chevalier Joaquim Possidonio Narciso da Silva [Hon. Corr. M.], whose portrait appears as a frontispiece to the pamphlet, and lists of whose works as an architect and archaeologist, and of the numerous distinctions conferred upon him, are given at the end [Typographia Universal, Lisbon]. M. Charles Buls has presented his pamphlet *Le Pélerinage d'Olympe* [Alfred Vromant & Cie., Brussels]; and Mr. John Hebb [F.] *La Polychromie dans la Peinture et l'Architecture Arabes en Egypte*, by Max Herz, architect, communicated to the Institut égyptien on the 6th January 1893 [Imprimerie Nationale, Cairo]. *Betterment by the Council versus Betterment by Recoupment* [Diprose & Bateman, London] has been received from its author, Mr. Walter Emden of the London County Council.

The Technology Quarterly, No. 4, vol. vi., contains amongst numerous papers one read by Mr. Howard A. Carson before the Massachusetts Institute of Technology last December on *The Metropolitan Sewerage System*. The Paper is well illustrated. Parts 6 and 7 of *Der Formenschatz* (G. Hirth, Munich and Leipzig) have also been received.

Ornamental cards have been received from the Comptroller's Office, Guildhall, as mementos of the ceremony of opening the Tower Bridge by the Prince of Wales, on behalf of the Queen, on the 30th of last June.

A new work, just issued, entitled *Three Periods of English Architecture*, by Mr. Thomas Harris [F.] has been presented by the publisher, Mr. B. T. Batsford. It contains several beautifully printed plates and other illustrations.

REVIEWS OF NEW BOOKS. XII.

(33.)

BRITISH ANTIQUITIES.

Archæologia Oxoniensis. Part IV. 8o. Oxford and London 1894. Price 2s. [Mr. Henry Frowde, Amen Corner, London.]

The new part of *Archæologia Oxoniensis* not only keeps up to the promise of its predecessors, but goes beyond the previous numbers in the

variety and interest of its contents. The first article concludes Mr. Landon's valuable series of papers on the Heraldry of the Colleges of Oxford, and is written in the true heraldic spirit of uncompromising accuracy in even the most minute details; many curious pieces of history are to be found here, together with sundry useful warnings of the dangerous consequences of "a little knowledge," never so fatal as in matters heraldic. There are many excellent people who thoroughly despise all such labour as trivial; who, while prone enough to avail themselves of heraldic adornments as telling aids to decorative effect, or at least as serviceable for filling up blank spaces, are yet rather proud of not caring a fig whether what they carve or paint is really correct and appropriate. Yet are not the entirely arbitrary and conventional character of heraldry, and the perfectly free option which now exists as to its use or non-use, the very things which ought to ensure it proper treatment? Call it a childish game if you will (and heraldry is like a game in respect that no one is obliged to take it up unless he likes); but if you do elect to play—play according to the rules! And it will be found that the very definiteness and strictness of these rules make them all the easier to learn and to apply. Heraldic symbols, moreover, may be regarded as a method of succinctly relating facts independently of writing, and have the valuable property that, if correctly expressed, they can always, like a good code of signals, be correctly interpreted; the carelessness which represents them wrongly is not a mere artistic blunder, it is a wilful confusion and falsification of records which otherwise would be of invaluable service in historic research.

In a short note, Mr. J. Park Harrison throws some useful light on a rather obscure subject—the roof-coverings of Saxon churches; these he shows to have consisted, in some instances at least, of small plates of lead, cast in rounded forms, and laid in overlapping courses, in appearance very much resembling the scale-shaped tiles often used to cover the walls of South-country cottages.

A Roman pedestal lately discovered at Cirencester, with an inscription of considerable interest, especially from its bearing on the geographical divisions of Roman Britain, is described and illustrated by Mr. F. Haverfield in a scholarly paper; that excellent authority on military archaeology, Mr. Oman, discusses Rouse's curious drawings of fifteenth-century warfare, with many instructive comments; and last in order, but not least in interest to architects, Mr. J. Oldrid Scott contributes an article, unfortunately without any illustrations, on "The New Window in Lichfield Cathedral." Mr. Scott gives a very clear explanation of the reasons which determined his bold, and it is to be hoped successful, action in the North Transept. He frankly apologises for what he allows was a departure from the principles of

conservative restoration; but he defends the course which he adopted as being the only sound and rational one in the circumstances, and maintains in addition that the work rendered necessary by considerations of safety has actually proved an artistic gain to the Cathedral. Though he can never hope to satisfy all critics, Mr. Scott has certainly got a strong case, and urges it in a very convincing manner.

The numerous short notes and reviews can only be mentioned, as serving to complete a capital number of a publication which worthily deserves to flourish.

ARTHUR S. FLOWER.

(34.)

BUILDING LAW.

A Treatise on the Law of Support for Land, Buildings, and Public Works. By George Banks, M.A., Barrister-at-Law. Royal 8o. Lond. 1894. Price 10s. net. [Messrs. Sweet and Maxwell, Chancery Lane.]

The Law of Building and Engineering Contracts, and of the Duties and Liabilities of Engineers, Architects, Surveyors, and Valuers, with an Appendix of Precedents, and an Appendix of Unreported Cases. By Alfred A. Hudson, Barrister-at-Law. Royal 8o. Lond. 1891. Price 29s. net. [Messrs. Waterlow and Sons, London Wall, and Messrs. Stevens and Haynes, Bell Yard, Temple Bar.]

To those architects and surveyors whose minds have a legal bent I do not know a book which should be more thoroughly welcome than this recently published work of Mr. Banks. His style is exceptionally lucid and clear, and complicated questions of law are so brought before us that little difficulty of thoroughly grasping their meaning, even to laymen, is presented. This fact, together with an excellent "Table of Contents," should secure for Mr. Banks's work a rapid exhaustion of the first edition.

The value of the work to architects and others engaged in building or mining operations is unquestionable, and a perusal of the cases cited, and of Mr. Banks's introductory remarks, will show that too much care cannot be exercised when dealing with property from which adjacent or sub-jacent rights of support may or do exist; the conclusion one arrives at being that it will not be safe to jump at any conclusion on any particular case, but that each must be thoroughly investigated and its merits laid bare.

I shall not attempt to present a detailed review of this exhaustive work, but I heartily recommend its perusal to all, and express the hope that Mr. Banks's labours will secure that reward which will be most pleasing to a good author.

Mr. Hudson's book on the Law of Building and Engineering Contracts is already tolerably well known to those engaged in matters connected with building, and it is not too much to say that it cannot be too well known, forming as it does a complete text-book on the large and important subject with which it deals, rendered additionally valuable by the fact that it has been written and compiled by

one who, prior to his becoming a barrister, had become versed in the technicalities and practical difficulties connected with building operations, by himself practising as an architect.

To say that client, architect, and builder should not be without such a book would be poor praise for the work done; but speaking for my own profession, I may safely say that it is nothing less than a necessary part of an architect's education that he should make himself thoroughly acquainted with all Mr. Hudson has to say on those legal essentials an ignorance of which may easily land client, architect, and builder in ruinous complications. The work is made more useful and indeed attractive by the precedents and authorities cited, and more complete by quotations of not only the reported cases, but of important judgments the transcripts of which have been furnished by parties interested.

Mr. Hudson is not a whit too strong in his caution to builders not to sign contracts undertaking to abide by the decision of a third person directly interested in pleasing his employer by his decision; but, notwithstanding the many cases one could mention in which the builder has been defrauded by unscrupulous third persons, we still hear of his placing himself on the losing side by blindly signing documents specially prepared for his future delectation; and one views with favour the suggestion of Mr. Hudson that the large interests at stake, and the peculiarly technical nature of building contracts, would justify the formation of a "Building Court," presided over by a judge with assessors. The information given on pp. 29-30 respecting valuations by men who have not taken out a licence will surprise a great many architects, as it seems that the enactment referred to is wide enough in its terms to cover every valuation made by an architect which is binding between the builder and employer. The enumeration of the duties of an architect on pp. 42-43, &c., will, perhaps, lead some architects to the conclusion that, after all, their duties do not cease with pretty sketches of imaginary buildings, taken from impossible points of sight.

Mr. Hudson follows on with detailed examination into the rights and obligations of quantity surveyors, arbitrators and awards, extras, certificates, professional charges, and all the paraphernalia attaching to the law and practice of the architect and surveyor, and too much commendation cannot be expressed for his labours, which must prove so useful to every architect and surveyor who desires to steer right.

Mr. Hudson has also published a little book entitled *Legal Advice to Engineers, Architects, Surveyors, Contractors, and Employers*; but as this is really a concise epitome of his larger work just referred to, and that in a very readable form, I need only say that the commendation which is

due to the more comprehensive work applies equally to this handy little pamphlet.

WM. WOODWARD.

NOTES, QUERIES, AND REPLIES.

The Suez Canal and the proposed Philæ Reservoir: a Possible Parallel.

Can it be that the British engineer is more than once destined to seek and find a Nemesis in Egypt? In the palmy days of jocular legislation, when the French had a great and well-considered scheme for uniting the waters of the Red and the Mediterranean Seas, certain chiefs of engineering science in England drew up a report to the effect that the canal which Ferdinand de Lesseps had the temerity to plan was, though not wholly impracticable, a Quixotic scheme which a business-like people with sound common sense would do well to avoid; and therefore England turned a cold shoulder upon it, with results such as ordinary travellers to the far East may daily see and admire. The Suez Canal is now one of the most reasonable, useful, and creditable efforts of science that the moderns have achieved—a boon to the world generally and to the British Empire in particular. Yet if it had been left to some of the engineers of this country to utter a last word in the matter, the cutting of a canal from Port Said to Suez might even now perhaps have been a burning question of the day; and the destruction of Philæ the Beautiful reserved to grace a future and possibly remote engineering triumph. But as the Suez Canal, in spite of the British engineer, has been a fact for more than a quarter of a century, so the question of the hour in Egypt and the United Kingdom is the submergence of Philæ and its historical monuments—a question to which the British engineer is again ready with a cut-and-dried answer. This time, however, he has a scheme of his own: the erection of a huge dam, nearly a mile in length and 70 feet high, across the bed of the Nile, in order to pond up the water for a hundred miles in a huge reservoir, which will menace by its presence not only the population in its immediate vicinity, but jeopardise even the agricultural existence of Egypt.

When, after the Indian Mutiny, a great line of railway was laid down between Calcutta and the North-West Provinces, care was taken not to run it through or into the great cities it was intended to serve. Strategists argued that the main line must be secure from the danger of being blocked or injured by any sudden rising of the population, or of being seized by insurgent forces, whereby the highway from East to West and North might be endangered. Hence the traveller who visits Benares has, or had, to change carriages at a junction a few miles from the sacred city. It is the same at Agra, the same at Delhi, each of which is at some miles' distance from the main

line. Nobody has doubted the wisdom of such a plan in a densely populated country held by a few men of another race. But in Egypt things appear to be looked at from a different standpoint, and Government as well as the British engineer seem prepared to try experiments on the sole artery through which runs its life-blood. And the excuse for it is that a reservoir in that position will be comparatively cheap! Yet the engineers of ancient Egypt, in their successful efforts to improve Lower Egypt, set an example to their successors of to-day when they took advantage of the strange, rock-girt depression of the Fayoum, some seventy miles from Cairo, and created with Nile water a vast lake which, during a part of the year, they kept within its proper bounds, and during another part caused to flow back to the Nile for the special use and irrigation of the Delta. Though the British engineer of to-day seems willing to ignore this fact, the rest of the thinking world, on the contrary, would emulate the deed of Moeris, and thereby leave the course of the Nile absolutely free. How this can be done no one has shown better than Mr. Cope Whitehouse, a gentleman who devotes his life to familiarising the public with this important subject, piously hoping, no doubt, that in remote new editions of the *History of Egypt* his name may be ultimately coupled with that of the mythical king. And if it be true that whoever makes two ears of corn or two blades of grass grow upon a spot of ground where only one grew before does more essential service to his country than the whole race of politicians put together, surely the man who would bring again corn out of Egypt—or, if not corn, cotton—to London, as in days when Egypt was the granary of Rome, and this without outraging the artistic sentiment of the world, has fairly earned an instalment of honours that Swift thought should be his due.

Mr. Cope Whitehouse, in a variety of articles [see pp. 573-82 for a contribution from him], has shown how Lower Egypt may be provided with all the water it requires, without inflicting upon the whole Egyptian population a perpetual sense of insecurity. The British engineer, on the contrary, in his haste to provide Egypt with a lake that shall never run dry, proposes to place it 500 miles south of where it is really wanted. Though more than a generation ago he expressed grave doubts about the endurance and financial success of the Suez Canal, he has now nothing but the most sanguine conviction that the reservoir he is prepared to construct in the valley of the Nile itself is the best and only businesslike solution of the question how to water the Delta during a part of the year. Yet there are still many businesslike people with sound common sense, both at home and abroad, who believe that the only enduring fact likely to accrue from the accomplishment of his Quixotic scheme will be the irreparable destruction of Philæ and its historical monuments. Indeed, it is not in

the land of the Pharaohs that men look for the British engineer's most brilliant successes, ubiquitous as are the monuments of his skill and energy. In the case of the Suez Canal he was supremely wrong, and there is nothing sufficiently encouraging in his present scheme of a Nile reservoir to show that he may now be supremely right.

Systematic Testing of Bricks & Brickwork [p. 463].

In the last two Supplements to the JOURNAL has appeared the initial list of subscriptions promised towards this Fund contingently on the estimated sum required, £200, being contributed. The Ex-President, Mr. J. Macvicar Anderson, heads the list with the liberal donation of £10 10s., but so far the sum subscribed falls very far short of the required amount, the total subscriptions at the date of going to press only reaching £54 12s. Should the Fund be satisfactorily established, it is intended to apply it in the first instance towards the systematic testing of brickwork according to the scheme described in the report of the Science Standing Committee printed at page 55. The need for more exact knowledge of the relative strength of bricks and brickwork is generally admitted, and the most satisfactory means of meeting the want is by such a series of practical and authoritative tests as is recommended by the Science Committee. Members of all classes of the Institute are therefore earnestly requested to aid by their subscriptions in carrying out the necessary experiments, and to send in their names, with the amount of their intended donation, to the Secretary of the Institute at as early a date as possible. A complete list of subscribers will be published a little later.

"Augustus Welby Pugin and Furniture" [p. 517].

From FRANCIS T. DOLLMAN [4.]—

It really did me good to read Mr. Crace's remarks on the late highly gifted Augustus Welby Northmore Pugin. I am one of the very few survivors of his father's [Augustus Pugin's] pupils, and A. W. N. Pugin was in age only a few months in advance of myself. Of course, I knew him well, and appreciated to the full his truly wonderful powers. Mr. Crace speaks of his extraordinary rapidity in drawing. I can by experience fully endorse this, for on one occasion he and I were on a steamer going from Ramsgate to London. The sea was especially lively that morning, and when the vessel was rounding the North Foreland it was particularly demonstrative. I went into the chief cabin, and there found Pugin sitting at the edge of a table with a small board and a two-foot rule in his hand (he never used a T-square), an ink-bottle at his button-hole, and his pen covering the paper with most elaborate detail with the greatest rapidity. "Does not the motion of the boat trouble you?" I said. "Not in the

"least," was his reply, and he continued to work on with the utmost unconcern. It is really too bad that anyone should affect to undervalue the extraordinary powers of Pugin; and to read, as I (and very likely others) have read, criticisms on Pugin as one who was only able to design a boss, a finial, or a crocket puts a severe strain on one's patience. *Requiescat in pace.* Pugin did his seventy years' allotted work, alas! in only forty years.

From WILLIAM WOODWARD [A.]—

Mr. Crace accentuates a subject by no means unimportant in its bearings. The broad question is whether the designing of Furniture properly comes within the scope of the architect's true functions. And we are at once confronted with the query, what is "Furniture"? I answer it by defining "Furniture," which should be outside the true architect's domain, as those movable items in a building which do not form an integral part of the structure, and which are usually taken away by the occupier at change of quarters. That the architect may have a voice in the selection of even those movable items is not, of course, open to question, but to foster the idea that it forms any part of the functions of the architect to design and superintend the manufacture of such work is, in my opinion, fraught with the greatest mischief to the young architect, and is a mistaken notion which must culminate in distinct injury to the profession. Again, as Mr. Crace points out, there are manufacturers "whose very contact with the processes of production has made them keenly alive to the best capacities of the product and to the best taste of the day," and I need not weary my readers by quoting a list which is known to everyone who has given the least consideration or thought to the very beautiful products of the brain and hand of these masters of their craft. It is very difficult to avoid comparisons in such matters; and to men of taste who are not led away by strivings after idiosyncrasies and impossible ideals, the general conclusion is that experts in any particular branch of science or art produce far more satisfactory work than those who think they can acquire in a day the result of a life's study. Sir Frederic Leighton, in his address [p. 553], made some home-thrusts which will, it is to be devoutly hoped, bring before the patrons of architectural Art a sense of the injury they have done in supporting the superficialities of men who have neglected true principles, burlesqued architecture, and dragged it down from that high pedestal upon which, in England, the genius of Wren, Barry, Pugin, Smirke, Hardwick, Cockerell, Pennethorne, Scott, Street, Burges, and others placed it.

A Learned Lodge of Masons.

From WYATT PAPWORTH [F.]—

In the *Ars Quatuor Coronatorum Transactions*, vol. vi., 1893, there is an admirable likeness of

Professor T. Hayter Lewis, F.S.A. [F.], Past Master of the Lodge, and a copy of it, I would suggest, should be preserved in the Library. Among the many papers of interest in the volume is one entitled "The Tau as a Keystone," by the late H. J. Whympster. It has reference to the construction (in India) of an arch with perfectly square stones, such arch eventually requiring a keystone of the segmental shape which is adopted in the "Mark Degree" of the fraternity. A photograph is given of the ruins of the Temple of the Sun at Marttand,* dated about 700 A.D., and sketches of earlier instances of the use of this keystone in other Kashmir temples, up to 220 B.C.

Mr. C. Purdon Clarke [F.] contributes a paper of special interest to architects on "The Tracing-board in Modern, Oriental, and Mediæval Operative Masonry," in which he relates the practice of the Persian master-builder in setting out his work of building a house, apparently independent of the aid of plans; actually he has first of all worked out the general scheme on a sectional-lined tracing-board—the key to the mystery of their craft. The use of drawn plans is shown by the Chaldean statue, now in the Louvre, of a princely builder or architect who lived about 2000 B.C., the Egyptian canon of proportion, B.C. 1250, and the change of scale necessary when representing figures of different sizes in the same picture. These are illustrated, as well as the canon of the human figure, from Vitruvius, 1521, from a drawing by Lionardo da Vinci. An Ionic Cap and Base, from the edition of Como, 1521; a Roman interior, from the same; a sketch plan, attributed to Raphael Sanzio, A.D. 1514—these are all developed on squares. A figure, taken from the portico at Madura, exhibits the use of a centre line, equal to the height of the required figure, divided into ninety-six parts, and the figure is developed upwards—an ancient system still in use at Madura in 1882.

A continuation of this remarkable paper is given by Mr. W. Harry Rylands [H.A.], who quotes various references to the tracing-board of the mediæval period; and others to the Egyptian period. The statue above mentioned is that of the architect Gudea, discovered at Tello by M. de Sarzec, and given in his *Découvertes en Chaldée*. In the work by Prisse d'Avennes several examples will be found of the use of squares as a basis for designs. Scales are given in his illustrations.

Some old lodge chairs at Coventry and Exeter are interesting as examples of furniture of the end of last century.

The volume contains some good photographic views of Canterbury and its cathedral, which are given as mementoes of the "summer outing" of 24th June 1893; and an account of the remarkable

* See Mr. Simpson's sketch of the Temple at p. 100.

frescoes (?—W. P.) in the chapel of St. Gabriel, probably 750 years old. Six photographs of these are included, with a view of the apse.

Some of the fraternity may be glad to know of the second paper on "Masonic Clothing," by Mr. Fred. J. W. Crowe.

Painting of Arabic Buildings in Egypt.

From JOHN HEBB [F.]—

Mr. Max Herz, architect to the Commission for the Protection of Arabic Buildings in Egypt, has recently published in pamphlet* form a communication made by him to the Egyptian Institute, in which he urges on the Commission the advisability of restoring the painted decoration of these buildings to their original brilliancy. Mr. Herz is of opinion that the walls of the mosque Ibn Touloun (recently restored), which are covered with plaster arabesques, were decorated in colours, although all trace of this decoration appears to have been lost. This mosque had previously undergone several restorations, one at the close of the thirteenth century by Houssâm-el-Dyn Lachyn, to whom the mosque (which was then in ruin) served as a sanctuary, and it was in remembrance of this circumstance that he restored the building. The mosque El-Azhar underwent the same fate, as well as the mosque El-Hakem, which has long been a ruin, and the *madrassas* El-Kamelieh and El-Sählebieh, which are of the first half of the thirteenth century. Mr. Herz, apparently, proposes to restore the painting to these buildings from some slight remains of decoration discovered by him on the ancient gate of the citadel, built by Saleh-el-Dyn towards the end of the twelfth century, which he has reason to believe was largely employed towards the end of the thirteenth century. At the mosque El-Mouayyed the Commission removed no fewer than five coats of plaster from a portion of the walls, disclosing some exquisite arabesques and inscriptions in relief richly gilt and coloured, of which an illustration is given. Mr. Herz is of opinion that it would not be difficult from the traces which remain to restore this painting to its primitive splendour. He also proposes to restore the decoration to a tomb of the time of the Sultan Kaitboy, known as the Kobbat (cupola)-el-Faddaouieh, at Abbassieh, near Cairo, which is richly adorned with arabesques in wet plaster painted in colours. Mr. Herz contends that the portions of decoration which are painted red were intended to be covered with gilding, of which he has found some slight remains, and recommends that this gilding should be renewed. This is an extremely hazardous step, as it will be impossible to imitate the colour of the old gilding.

* *La polychromie dans la peinture et l'architecture arabes en Egypte*, par Max Herz, architecte. Le Caire, 1393.



9, CONDUIT STREET, LONDON, W., 26 July 1894.

PROCEEDINGS OF ALLIED SOCIETIES.

The Devon and Exeter Society.

On the 21st inst. the Devon and Exeter Architectural Society visited Plymouth with the view of holding a Conference relating to professional education in the counties of Devon and Cornwall, and the extension of the Society's work in those two counties. At Plymouth, after having been joined by several of its county members at Millbay, the company were met at the Athenæum by Mr. James Hine [F.], who had kindly undertaken the duties of guide for the visit. At the Conference the chair was taken by the President, Mr. J. Jerman [F.], and among others present were Messrs. Edward Appleton [F.], M.Inst.C.E., and E. H. Harbottle [F.], past Presidents; Messrs. J. Crocker [F.], H. G. Luff [A.], and N. G. Bridgman [A.].

In opening the proceedings, the President said there were two subjects for consideration. The first was the extension of the Society's area of work. At present they had a very respectable list of members from the county, but they desired to fulfil the mission imposed on them by the Royal Institute, and embrace the adjoining county of Cornwall. In April last year the Institute submitted a proposal to divide the United Kingdom into provinces for the promotion of architectural education by the systematic organisation of such means of instruction as were at present available. It was hoped by such Conferences as that, some decided steps might ultimately be taken for promoting instruction in professional work.

In the course of the discussion, Mr. Thorne (Barnstaple), speaking of architectural education, dwelt upon the necessity of the provision of a circulating library for the benefit of students, so that similar advantages might be given as provided for London and other districts, and he suggested that a fund should be raised for that purpose. The suggestion was cordially approved. The Hon. Secretary (Mr. E. G. Warren) announced that a room had been secured for the Society at Commercial Chambers, Exeter, where he hoped a library and reading-room would be started forthwith. He also expressed a wish that county members would, on their visits to Exeter, use the room. The resolutions eventually passed were:—"That the Council of the Society consider the desirability of providing for lectures of an educational nature"; and "That steps be taken to harmonise the name of the Society with the district included by the Royal Institute of British Architects, viz., Devon and Cornwall."

The Northern Association.

The annual excursion of the Northern Architectural Association was held on Saturday, the 21st inst. The following twenty-seven members assembled at Thirsk station:—Mr. J. Oswald [F.] (Newcastle), President, and Mr. J. H. Morton [F.] (South Shields), Vice-President; Messrs. J. T. Cackett [F.] (Newcastle), Treasurer, H. C. Charlewood [A.] (Newcastle), Hon. Librarian, J. W. Donald [A.] (South Shields), W. Glover (Newcastle), W. Hope (North Shields), W. Livesey (Baby Castle, Darlington), A. B. Plummer [F.] (Newcastle), Hon. Sec., F. W. Rich (Newcastle), E. Shewbrooks [F.] (Newcastle), W. P. Brewis (Newcastle), H. Cayley, M.A. (Durham), R. B. Dick (Newcastle), T. A. Lofthouse [A.] (Middlesbrough), C. T. Marshall (Newcastle), S. Piper (Newcastle), E. and R. Rich (Newcastle), J. W. Twist [A.] (Selby and Leeds), G. Brumell (Morpeth), R. H. Morton (South Shields), H.

Oswald (Newcastle), H. Raine (Sunderland), J. A. Loft-house (Middlesbrough), C. J. Pringle (Newcastle), and H. Gibson (North Shields). The party travelled by special saloon carriage from Newcastle. Conveyances were in waiting at Thirsk Station, and the members were driven to Coxwold (passing Shandy Hall), where the church was inspected. They then proceeded to Ryland and Rievaulx Abbeys, where a very pleasant afternoon was spent. The members then returned to Thirsk, and dined at the Fleece Hotel. Mr. J. A. Loft-house was elected a Student during the day.

The South African Association.

In delivering his Address on the 27th ult. as retiring President of the South African Association of Engineers and Architects, whose centre is Johannesburg, Mr. Arthur H. Reid [F.] remarked with pride on the result of the past year's labours of the Association. The Council's report showed that the general meetings and visits to works numbered 17; the Council and special Committee meetings, 22. The membership roll had increased from 43 to 56, and 19 papers or addresses had been read by members. The financial position of the Association was satisfactory. The library and reading-room had proved useful to members, and during the coming year they would be added to, as far as the funds of the Association admitted. The Council had decided to have all the papers that had been read by members printed for circulation in pamphlet form. Members, and more especially new-comers, would find them both interesting and instructive, and Mr. Reid recommended their presentation to the several professional bodies at home and abroad. He was of opinion that during the coming year they should take steps to become affiliated to some of the European professional bodies. Their position was now established as the only representative body in Africa, and the *personnel* of their members was so powerful in numbers and status that a successful career seemed assured. He would take the opportunity of tendering his congratulations to the Royal Institute of British Architects, London, which would celebrate the sixtieth anniversary of its foundation on the 2nd July, and in doing so would express the hope that, by following the excellent example of the Institute, their Association might in the future occupy the same honourable position as the senior body in Africa that the Royal Institute of British Architects occupied in the old country. He would suggest that the incoming Council should arrange for an exhibition of drawings, photographs, and samples during next year. He also thought a medal should be offered for the best paper read by any member before the Association in successive years, and it might be well, in the public interest, if the Council had the power to specify the subject. It afforded him great satisfaction to report that a distinct improvement in the class and quality of buildings erected in Johannesburg had taken place during the past year. The residential buildings recently completed were, as a whole, far superior to those met with in the neighbouring Colonies, as regarded comfort, sanitation, stability, architecture, and furniture. The business premises were even more marked in their improvement, and the town might well be proud of such structures as Henwood's Buildings, the Ægis Buildings, the Gold Fields of South Africa Block, Green's Chambers, and many others. In view of the rapid increase of the town, the President suggested that the Council should place their services at the disposal of the Sanitary Board, with the object of producing new and improved Building By-Laws. The existing ones were practically unworkable, and new ones were absolutely necessary. For instance, provisions for the escape of inmates and salvage of goods in case of fire should be made imperative in the immense piles that were being erected. Access to roofs of all buildings over two storeys high should be provided with hand-rails for the safe passage of the inmates of the upper floors in case they were cut off

from escape by the staircases. A limit to the height of buildings in streets of varying widths should also be fixed. Regulations bearing upon party-walls were most necessary, as the present absurd system of erecting two independent side walls to each building, and wasting two or three feet of frontage in doing so, could not, in the face of the value of land and frontage, continue. He had just successfully carried through the first party wall contract entered into in Johannesburg, which he reckoned saved his client 300*l.* and two feet in the width of his frontage, and his neighbour the same. The disfigurement of streets by huge advertisement hoardings had been started, and should be suppressed, and the matter of sky signs also required regulation; and some steps should be taken to curtail the network of overhead telegraph, telephone, and lighting wires that were now spoiling the appearance of their streets. Being himself a member of the Sanitary Board, he should have much pleasure in introducing any proposed reforms to the attention of that body. During the past year or so they had been provided with suitable Law Courts, Hospital, Market, and Police and Gaol accommodation, and would shortly have new Post and Telegraph Offices; but a Town Hall, Public Offices, Fire-Brigade Station, Public Bath and Washhouses, Slaughter-houses, Library, Churches, Schools, a proper Water Supply, Drainage System, Garbage Destructor, Town Lighting, and last but not least a Town Clock, were still to seek. The building trade had been supplied with all labour it required for the past year, and the class of labour was much improved. There had been no strikes or disturbances in the constructive trades, but there had been many serious failures on the part of the masters, involving merchants and employers in heavy losses, and causing both engineers and architects serious annoyance. He attributed most of these failures to a lack of business capacity and capital, combined with incompetence in the matter of estimating. It was most necessary that a Master Builders' or Contractors' Association be formed for the purpose of keeping the trade together, establishing a business-like routine in the conduct of contracts and in estimating for them, and of providing a competent practical body, to whom the professions would look for advice and assistance in case of need.

The Royal Victorian Institute, Australia.

Intending candidates for Associateship of the Royal Victorian Institute of Architects are now required to pass an Examination conducted on almost identical lines with the R.I.B.A. qualifying Examination. A Board of Examiners is appointed by the Council; the Examination is written, graphic, and oral, and lasts five days; candidates must be at least twenty-one years old, and must submit, to the satisfaction of the Council, evidence of general education and authenticated proofs of ability in drawing before they are admitted to the Examination. The Probationary work required consists of a building of the candidate's own design, fully drawn out as working drawings to a scale of $\frac{1}{4}$ inch to the foot, and comprising plans, elevations, and sections, fully figured, showing construction, drainage, &c., with details of construction and ornament, and a perspective view; also a drawing of architectural ornament—Classic or Mediæval—from the round or relief, in outline or shaded. The syllabus of the Examination is divided into three groups or sections—namely, Group A, History and Characteristics of the Styles of Architecture; Mouldings, Features, and Ornament; Geometrical and Perspective Drawing. Group B, Shoring; Sanitary Science; Water and Gas Supply; Nature, Property, and Application of Materials; Principles and Practice of Construction. Group C, Drawing and Designing; Planning and Arrangement; Specifications; Quantities and Estimates; Professional Practice; Oral Examination. Instead, however, of presenting themselves for the whole of the subjects at once, as in the R.I.B.A. qualifying Examination, candidates are permitted to take any one of the Groups A, B, or C in

successive Examinations. In such case a considerably higher proportion of marks must be gained in each subject than is required from candidates entering at once for all the subjects. Certificates are not granted, nor results announced, until the candidate has passed in all the groups. The President of the Royal Victorian Institute is Mr. A. E. Johnson [F.], *Soane Medallist 1843*.

PARLIAMENTARY.

The House of Lords on Betterment.

The Select Committee of the House of Lords appointed to consider and report whether, in the case of improvements sanctioned by Parliament and effected by the expenditure of public funds, persons, the value of whose property is clearly increased by an improvement, can be equitably required to contribute to the costs of the improvements, and, if so, in what cases and under what conditions Parliament should sanction the levying of such contributions in Local Acts or Provisional Order, have issued their Report in the following terms:—

1. The Committee have taken evidence from the promoters of several Bills which have contained provisions for imposing what has been called a betterment charge in respect of improvements effected by local authorities.

2. They have also had before them witnesses who have had experience of the actual working of betterment charges in various forms, and they have taken the evidence of other experienced witnesses and of gentlemen who have written upon the subject.

3. They made known their willingness to hear any evidence that any municipal body or local authority might be disposed to lay before them. The Committee, having fully considered the evidence taken before them, have come to the following conclusions, viz.—

(1) The principle of betterment—in other words, the principle that persons whose property has clearly been increased in market value by an improvement effected by local authorities should specially contribute to the cost of the improvement—is not in itself unjust, and such persons can equitably be required to do so. But the effect of a public work in raising the value of neighbouring lands is shown by experience to be uncertain. Whether, in any particular case, it is possible for a valuer to pronounce that such an effect has been produced by the completion of any public work is a point upon which the evidence of eminent valuers differs greatly.

(2) The Standing Orders should be amended so that in any case where a Private Bill renders any property liable to a special charge on the ground that its market value will be increased by the completion of a public work, the owners of such property, or of any interest therein, shall be entitled to notice before the introduction of the Bill, in like manner as if the property were to be compulsorily purchased.

(3) It should be provided in the Bill that within some reasonable period after the completion of the work, the owner of the property intended to be charged should receive notice of the amount of the charge which the local authority proposes to make in respect of the alleged increase in the market value of the property due to the work in question. Inasmuch as the appropriateness of the period must to some extent depend upon the nature of the work and the condition of the neighbourhood, it would be difficult to fix any definite time applicable to all cases, but these considerations should be borne in mind by the Committee to which the Bill is referred. The period should not be so short that the effect of the improvement could not be adequately tested, and it should not be so long as to make the property intended to be charged suffer in its market value by the suspension of the decision as to the charge.

(4) In default of acquiescence by the person on whom

notice is served the amount of the charge to be made should be decided by an arbitrator, unless the said person claims to go before a jury, and the decision should be taken with as little delay as possible.

(5) All the costs of such arbitration or inquiry before a jury should be borne by the local authority claiming to lay such charge, unless the arbitrator or jury shall find or award the same sum or a greater sum than that which the local authority sought to lay upon the property, in which case each party shall bear his own costs incident to the arbitration or inquiry, and the costs of the arbitrator or jury shall be borne by each of the parties in equal proportions; unless it should be otherwise ordered by the arbitrators, or in the case of a jury by the High Court, upon the ground that the opposition to the proposed charge has been frivolous and vexatious.

(6) If the owner has property in the immediate neighbourhood which is found to be injured in its market value by the same work, the amount of the injury should be considered in determining the charge to be imposed upon him for improvements.

(7) If the owner is of opinion that the charge exceeds the enhancement of market value due to the public work, he should be entitled to claim that the local authority should purchase the property in question at the value which it bore, without regard to any improvement conferred or to be conferred upon it by such work; but under such circumstances a local authority purchasing a freehold or long leasehold should not be compellable to dispossess the occupying tenants, and should, if they prefer it, be empowered to purchase the reversion, subject to any intermediate interests.

(8) If any question should arise as to the incidence of the betterment charge between any of the persons entitled to different interests in the same property charged, the question should be determined by arbitration.

(9) Various witnesses have illustrated their opinions by reference to the Bills now before Parliament, but the Committee (to which these Bills have not been referred) has formed no opinion on the merits of either of the Bills in question; but inasmuch as the provision as to notices in paragraph (2) is inapplicable to the Bills already introduced, the Committee consider that it ought to suffice if the Select Committee to which the Bills in question are to be referred should be satisfied that adequate notice has been given to all persons who may be affected by the proposed process of charging.

(10) The Committee have received evidence upon what has been called "recoupment," that is to say, powers given to a municipal or other public body to take land beyond what is necessary for the actual execution of the work, so that some part at least of the improved value may be secured by the improving public body in ease of the burden upon the ratepayers. Some evidence was given by persons who had actual experience of the operation of such a system, the general effect of which was, that it had not proved successful; but the Committee are not satisfied that it has ever been tried under circumstances calculated to make it successful, inasmuch as no sufficient power has ever yet been given to local authorities to become possessed of the improved properties without buying out all the trade interests, a course which is inevitably attended with wasteful and extravagant expenditure.

THE LONDON STREETS AND BUILDINGS BILL.

The Select Committee's Reports [p. 589].

On the 19th ult. Mr. Stuart-Wortley reported from the Select Committee to whom the Bill was referred: That they had agreed to the following Report:—

That a Report from the Home Office had been considered by the Committee, and that they had adopted such of the recommendations therein contained as appeared applicable to the case as submitted to them.

That there are no other circumstances of which, in the

opinion of the Committee, it is desirable that the House should be informed.

Mr. Stuart-Wortley further reported:—

That they had examined the allegations contained in the Preamble of the Bill, and found the same, as amended, to be true; and had gone through the Bill, and made amendments thereunto.

On the 9th inst. Mr. Stuart-Wortley reported from the Select Committee to whom the re-committed Bill was referred that they had made further amendments thereto, and had agreed to the following Report:—

That a Report from the Home Office on the Bill, dated the 27th April 1894, together with a Supplemental Report, dated the 13th June 1894, were laid before the Committee. As regards the clauses referred to in these Reports:

Clauses 139 and 164 were withdrawn by the promoters.

Clauses 136, 150, 179, and 180 were, in various ways, amended and modified.

As regards Clause 144:

After considering the existing enactments, which will be consolidated or re-enacted under the Bill, the Committee were of opinion that this clause might be allowed.

That there are no other circumstances of which, in the opinion of the Committee, it is desirable that the House should be informed.

Mr. Stuart-Wortley further reported:—

That they had amended the Preamble of the Bill by striking out the recital therein as to proceedings under repealed Acts, the clauses relating thereto having been withdrawn, and had found the same, as amended, to be true; and had gone through the Bill, and made amendments thereunto.

The Third Reading.

On the London Streets and Buildings Bill being brought up for third reading in the House of Commons on the 16th inst., Mr. Stuart moved that certain standing orders be suspended, and that the Bill be taken into consideration, provided amended prints have been previously deposited.

Mr. Howell moved as an amendment that the Bill be considered that day three months. He said that the hybrid committee to which the Bill had been referred, appointed on his own motion, had performed their work in an exemplary manner, and his objection was to the materials with which they had to deal. He held that a great province like London ought to be governed, not by private Bill legislation, but by public Acts. This Bill repealed three public Acts as regarded the matters covered by the Bill. It had been the recent policy of the House not to increase private Bill legislation, but, on the contrary, to substitute public for private Bills. . . . The dangers of private Bill legislation had been illustrated by the London County Council's General Powers Bill, some clauses of which had been unanimously rejected by the House. This Bill contained a dangerous dispensing power; and there was no course open to him but to move the rejection of the Bill by way of protesting against such private Bill legislation.

Mr. Stuart-Wortley said the opposition could hardly be serious, after the inquiry by the hybrid committee appointed on the motion of the hon. member himself. The issue now raised was discussed on the second reading of the Bill, and it was understood that the opposition was withdrawn on the condition that the Bill was referred to a large hybrid committee instead of the ordinary private Bill Committee. Having presided over the committee, he felt bound to say that the hon. member's precedents rather told against his motion. . . . He hoped the House would see that this Bill, which had received more than ordinary discussion, would pass without further delay.

Mr. Cohen said it was seldom he found himself able to support legislation promoted by the London County Council, but he cordially joined in the appeal that this Bill should not be further delayed.

Mr. Shaw-Lefevre thought it would be a great pity if this Bill, after all the labour devoted to it, were rejected.

The amendment was negatived, and on the question that the Bill be considered, Mr. Weir moved the following clause:—"The site of every house and premises to be built after the passing of this Act shall be drained in such a manner as to carry away all surface water, and such drainage shall be done to the satisfaction of the local authority."

Mr. Stuart said he must oppose the introduction of the proposed new clause. They had just managed to carry the consideration of the Bill against a strongly-expressed complaint that the provisions of the Bill were already too large. He was confident that it would be impossible to introduce a clause of this kind into the Bill until it had received full consideration at the hands of the Committee.

The motion was then negatived.

Sir C. Dilke moved, after Clause 210, to insert the following clause:—"210a.—After the passing of this Act it shall be lawful for the Council, on the application of any local authority, to transfer to such local authority any of the powers conferred by this Act upon the Council, and thereupon all the provisions of this Act and all by-laws made thereunder relating to powers so transferred shall be construed as if the local authority were named therein instead of the Council."

Mr. Whitmore thought that the members of the London County Council were willing to accept the proposal, and that the Committee would make no objection to such a clause being introduced. In his opinion the proposal was a good one.

Mr. Stuart felt compelled to oppose this proposal also, as it was not, in his opinion, germane to the object of the Bill. It might be desirable to raise the question on some other occasion, but under the present circumstances he asked the House to oppose the motion.

Sir J. Lubbock was inclined to think there was a great deal to be said in favour of Sir C. Dilke's proposal, but the present, he thought, was an inopportune time to press it upon the consideration of the House, and he hoped, therefore, that the right hon. gentleman would withdraw it.

The clause was by leave withdrawn, and the standing orders having been suspended, the Bill was then read a third time.

LEGAL.

Setting Back Buildings in Streets.

THE SUTTON LOCAL BOARD V. HOUGH.

This case, decided by Mr. Justice North on the 14th inst., calls for some notice. The plaintiffs applied for an injunction to restrain the defendant, a grocer, of 21 High Street, Sutton, from building beyond a line prescribed under section 155 of the Public Health Act, 1875. High Street is an old and very narrow thoroughfare in the plaintiffs' district. The defendant had pulled down and proposed to rebuild his shop on the old line. The plaintiffs had not prescribed any general building line for the street under section 154 of the Act of 1875, but fixed a line for the particular site some six feet behind the old line, and refused to pass the building plans unless they were altered to conform to the new line. This in effect amounted to setting back the shop front on the defendant's site, and he contended that it was not a *bona-fide* exercise of the local authority's powers, because on each side of his house were comparatively new houses, and the Board had not laid down a general line in that part of the street to be carried out under the compulsory powers of section 154.

Mr. Swinfen Eady, Q.C., and Mr. C. E. E. Jenkins supported the motion; Mr. Samuel Hall, Q.C., and Mr. Bramwell Davis opposed.

Mr. Justice North in giving judgment said it was obvious

that what the local board were doing was with a view to widen the street as opportunity arose when houses were from time to time rebuilt, and what they were doing was precisely what they were empowered to do by section 155 of the Public Health Act. It was true they had an additional power under section 154, but the exercise of that involved their taking the whole of the houses abutting on the side of the street to be set back. He could not see that the requiring the house to be set back some six feet was at all an unreasonable exercise of the board's power, and he must grant the injunction asked for.

Wooden Structure erected without Licence.

LONDON COUNTY COUNCIL v. HUMPHREYS.

This was a case stated by a metropolitan police magistrate, who had dismissed a summons charging the respondents with erecting a wooden structure of a movable and temporary character (called a bungalow) without the appellants' licence in writing, contrary to Section 13 of the Metropolitan Management and Building Acts Amendment Act (45 Vict. c. 14). It was proved that the respondents were manufacturers of, and dealers in, buildings constructed of wood and corrugated iron. Their premises included a piece of land 80 feet long and 40 feet wide, where for two years past cottages, bungalows, stables, &c., so constructed had been shown and sold to customers. The bungalow in question was 31 feet long, 28 feet wide, and 17 feet high to the ridge of the roof; it rested on the ground and had no foundations; the floor was wooden and the inside was lined with matchboarding; the outside was covered partly with corrugated iron and partly with wood; the roof was wood and iron; the interior was divided into four rooms by means of wooden partitions; there was neither chimney nor flue. The appellants contended that it was a wooden structure or erection of a movable or temporary character and came within the section, and the purpose for which it was erected was immaterial. The respondents contended that they had merely exhibited on their own premises an article which they had for sale, as a coach-builder exhibited vehicles which he made and sold, and that the section did not apply. The question was whether the learned magistrate was right in holding that the respondents had committed no offence. The case came before a Divisional Court (Mr. Justice Wills and Mr. Justice Kennedy) on the 16th inst.

Mr. Daldy, for the appellants, and Mr. Poland, for the respondent.

Mr. Justice Wills, in dismissing the appeal, said the case was one of some difficulty. The structure came within the actual words of the section, but the authorities cited showed that that in itself was not conclusive. The question was whether the Act was intended to apply to structures that were not purposed to be used where they stood, and were only part of a manufacturer's stock in trade. It was impossible to draw a logical line; but the question was to be answered in each case by considering what was the purpose of the structure and the object of placing it where it was placed. If the object was exhibition only with a view to removal when a purchaser could be procured, then the principle of the cases cited applied, and the Act did not affect it.

Mr. Justice Kennedy concurred. Was one compelled to hold that this temporary building came within the operation of the Act? On the whole, he thought not. It would be very difficult to formulate a definition. There was, however, one salient point. The structure was not intended for use on that spot. It was on the premises solely for the object of immediate sale. The Act was intended to apply to buildings movable and temporary, it was true, but only to buildings put up for use on the spot. If the Act covered this case, no one could construct a summer-house or any kind of habitation for man, still less could they expose it for sale outside, without a particular licence

from the London County Council in each case. The learned Judge could not hold that such could be necessary. The decision of the magistrate must be affirmed.

What is a New Street?

ST. GEORGE'S LOCAL BOARD v. BALLARD.

This case, adjourned from the Bristol Assizes, raised a point of some importance as to the construction of the local by-laws. The plaintiffs, the urban sanitary authority, claimed an injunction to restrain the defendant from laying out or constructing a new street at Providence Place, Church Road, Bristol, of a less width throughout than 36 feet, in accordance with the district by-laws. The real question was, what is a new street under the by-laws? It appeared that there was a certain lane about 8 feet wide and 175 feet long, commencing at the south side of Church Road, and ending in a *cul-de-sac* at the entrance of Christchurch Vicarage. On the east of this lane a row of houses called Providence Place had been built before the Local Board was created. On the western side was a strip of land which formerly consisted of gardens belonging to the houses before named. This strip was acquired by the defendant, who proceeded to build three houses upon it, although plaintiffs warned him that they would apply for an injunction to restrain him, on the ground that he was laying out a new street of a less width than that allowed by the by-laws. The material by-laws were as follows:—

4. Every person who shall lay out a new street which shall be intended for use as a carriage road shall so lay out such street that the width thereof shall be 36 feet at the least. 5. Every person who shall construct a new street which shall exceed 100 feet in length shall construct such street for use as a carriage road, and shall, as regards such street, comply with the requirements of every by-law relating to a new street intended for use as a carriage road. 6. Every person who shall lay out a new street which shall be intended for use otherwise than as a carriage road, and shall not exceed in length 100 feet, shall so lay out such street that the width thereof shall be 24 feet at the least.

The defendant said that the way in question, if a street at all, was an old street and not a new street. The three houses in question were shops in Church Road, having a frontage thereon of 51 feet. The flank wall of one house abutted on the lane in question, but none of the houses had or needed to have access to the lane.

Lord Coleridge, Q.C., and Mr. Radcliffe, for the plaintiffs; Mr. Bullen and Mr. Lloyd for the defendant.

Mr. Justice Lawrence gave judgment on the 21st inst., saying that the whole question really turned on the point whether, under the circumstances of the case, the defendant had laid out a new street or not. No one could doubt that, if he had proposed to build a row of houses opposite to Providence Place and extending for more than 100 feet, he would be thereby making a new street for use as a carriage road in accordance with by-law 5, and by by-law 4 this must be at least 36 feet in width. The fact that it was a *cul-de-sac* would make no difference in that respect. But the question was, whether building three houses opposite Church Road, one of them flanking on Providence Place, was laying out a new street. He felt great difficulty in saying that it was. If there were no land behind the three houses no one could possibly say it was. There was, however, a piece of land behind those houses which might or might not be built on. In *Gosset v. Malden Urban Sanitary Authority*, in which a man built houses abutting on a drive, the Court held that the sanitary authority had struck too soon. He could not help thinking that the same thing had happened here. As far as he could see, in the present state of things, there was nothing to justify him in saying the defendant was laying out a new street. The plaintiff was therefore not entitled to his injunction, and there must be judgment for defendant, with costs.

